# EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN AT PAEDIATRIC MEDICAL WARD IN INSTITUTE OF CHILD HEALTH AND RESEARCH CENTRE GOVERNMENT RAJAJI HOSPITAL MADURAI

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*A dissertation submitted to*

**THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,**

**CHENNAI - 600 032.**

*In partial fulfillment of the requirement for the degree of*

**MASTER OF SCIENCE IN NURSING**

**APRIL 2015**

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## ABSTRACT

**Title:** Effectiveness of Clay therapy on anxiety among hospitalized preschool children in paediatric medical ward at Institute of Child Health and Research centre, Government Rajaji Hospital, Madurai. **Objectives:** To assess the level of anxiety among hospitalized preschool children in experimental group and control group. To assess the effectiveness of clay therapy among hospitalized preschool children in experimental group . To compare the post test level of anxiety among hospitalized preschool children in experimental group and control group. To associate the level of anxiety among hospitalized preschool children with selected socio-demographic variables among the experimental group. **Hypotheses:** There is a significant difference between the level of anxiety among hospitalized preschool children in experimental group before and after clay therapy. There is a significant difference between the post test level of anxiety among hospitalized preschool children in experimental group and control group. There is a significant association in the level of anxiety among hospitalized preschool children with the selected socio-demographic variables in experimental group. Modified widenbach's prescriptive theory (1964) was adopted for this study. A true experimental - pre test post test control group design was used. 60 hospitalized preschool children were selected by simple random sampling method. Pre test was conducted by hospital observed behavior check list on the first day after obtaining consent from all the subjects then clay therapy was given 30 minutes once a day for 7 Consecutive days (total 7 sessions) for the subjects. Post test was assessed on $7^{th}$ day using the same tool. **Conclusion:** The study concluded that clay therapy is cost effective, non invasive, non pharmacological complementary and alternative therapy to reduce the level of anxiety among children.

# *Introduction*

# CHAPTER - I

# INTRODUCTION

***"Children are the hands by which we take hold of heaven."***

***- Henry Ward Beecher,***

The Wealth of a nation is not so much in its of economics and natural resources but it lies more decidedly in the kind and quality of the wealth of its children. It is they who will be the creators and shapers of a nation's tomorrow. Their quality and personality will determine the kind of destiny that beckons the nation.

***"Children are our most valuable resource."***

***- Herbert Hoover, 31st U.S. president***

*Children are one third of our population and all of our future*

***- Select panel for the promotion of child health, 1981.***

*I brought children in to this dark world because it needed the light that only a child can bring.*

***-Liz arm bruster***

Hospitalization is stressful for children of all ages. During a serious illness, children have a great need for their parents and can tolerate their absence only for short periods. They need to know that their parents will be there when they need them most and that they are loved and missed.

**Play has been recognised as important since the time of Plato (429-347BC).** Play is essential part of child and is important aspect in fostering growth and development. Toys are the tool of play. Play is synonymous with being a child and it is universal language of child. Children involved in the work of play do not require

expensive toys and gadgets to keep them entertained but often enjoy playing with common household items such as broom handle, boxes, clay materials, drawing book etc.

Play helps in the sensory motor and intellectual development. It also improve socialization and self-awareness. Creativity is developed through play. Play also has therapeutic and moral value. Therapeutic play provides diversion and brings relaxation, feels more secure in a strange environment, lessens stress and provides a means of release tension.

**Edwards, (2000)** stated that, children are in a constant process of development; in cognitive, physical, and emotional domains. The experience of illness or injury, hospitalisation and treatment impacts and intertwines with this process for each child.

**In the current scenario**, clay therapy act as a version of play therapy is employed as a therapeutic tool. Clay therapy is an adjunct to play therapy. Researcher use clay as a therapeutic tool has been effective for children in improving their problem solving skills, cognitive development, self esteem enhancement, decision making process, control of impulses, and anger. Clay therapy reduces children's fear and anxiety because it holds their interest, provides a wide array of connection by establishing an immediate problem solving environment which compliment the ongoing treatment plan and also fun. Therapist teaches children about some models made by clay.

**As in traditional nondirective play therapy**, research has shown that allowing an individual to freely play with the sand and accompanying objects in the contained space of the sand tray (22.5" x 28.5") can facilitate a healing process as the unconscious expresses itself in the sand and influences the sand player. When a client creates in the sand tray, little instruction is provided and the therapist offers little or no

talk during the process. This protocol emphasizes the importance of holding what Kalff (1980) referred to as the "free and protected space" to allow the unconscious to express itself in symbolic, non-verbal play. Upon completion of a tray, the client may or may not choose to talk about his or her creation, and the therapist, without the use of directives and without touching the sand tray, may offer supportive response that does not include interpretation. The rationale is that the therapist trusts and respects the process by allowing the images in the tray to exert their influence without interference.

Sand tray therapy can be used during family therapy. The limitations presented by the boundaries of the sand tray can serve as physical and symbolic limitations to families in which boundary distinctions are an issue. Also when a family works together on a sand tray, the therapist may make several observations, such as unhealthy alliances, who works with who, which objects are selected to be incorporated into the sand tray, and who chooses which objects. A therapist may assess these choices and intervene in an effort to guide the formation of healthier relationships.

**David Henley (2002**) Clay is universally recognized as a medium of creative expression and it also has great potential for therapeutic application. These two properties of clay are celebrated together in a book that explores the history, theory and techniques of clay work in eliciting therapeutic outcomes. Vignettes and case material explain and expand the text, which interweaves an appreciation of clay in art with many practical suggestions for its use in therapy. By according equal status to aesthetic outcomes and artistic integrity, the author offers a new and holistic approach to clay work. Practitioners and educators in the fields of therapy and art will find his book to be an essential source of information and ideas.

**According to the report of New York University of child study centre**, mental health problems may originate as early as in the preschool years. One in 10 children aged 2-5 years found to be experiencing anxiety. In that 9.5% have in the form of separation anxiety, social anxiety, specific fears, and generalised anxiety.

More over these severe and chronic conditions also have the potential to significantly cause impairment in academic, emotional, and social development. Thus as the understanding of these disorders has evolved, the need to recognize and effectively treat these anxiety has become more salient. Clay therapy is one of the important methods of prevention of anxiety disorder among preschoolers.

## 1.1 NEED FOR THE STUDY

40 % of India's population are below the age of 14 years. According to 2013 census. The national center for health statistics estimates that 3.5 million children under the age of 15 are hospitalized each year. Pre-school-aged children are particularly vulnerable to the effects of stress and fear during hospitalization. Children cope with their fears through problem-oriented, emotion-oriented, and function-oriented coping strategies. Even pre-school-aged children can express their emotions and expectations quite well orally.

In present scenario anxiety disorders are most common form of psychopathalology in preschool children with overall prevalence rate of 8-10%. Mental health professional believe that the majority of mental health problems in adult are rooted in childhood generally before the 8 years.

Children are generally a human between the stage of birth and puberty. The findings clearly indicate that children need adequate information tailored to their needs, that their views are sought in the planning and delivery of their care and that

hospital environment need to be made more child-centered. Interventions designed to reduce children's stress during hospitalization are not only likely to decrease their stress at the time, but also likely to influence how future experiences are appraised and managed.

All young children feel anxious at times. Many infants and toddlers, for example, show great distress when separated from their parents, and preschoolers are often frightened of strangers, thunderstorms, or the dark. These anxieties are normal and are usually short-lived.

An anxiety disorder occurs, however, when a child experiences excessive worry, concern, or fear while involved in developmentally appropriate tasks, ordinary interactions, and everyday routines. Anxiety disorders in children are characterized by worry, concern, or fear that is exaggerated, pervasive, disproportionate to the situation at hand, and inappropriate for the child's age or developmental level.

A prevalence rate of psychiatric morbidity among pediatric population has been reported since very early (Sethi *et al*.) but these studies did not report prevalence rates of anxiety disorders separately. In one of the earliest known report on neurotic disorders, Nagaraja observed childhood neuroses in 9.7% of out-patient population and 9.3% of inpatients over a period of seven years in Hyderabad with a male to female ratio of 1:2. Manchanda *et al*. found neurotic behavior in 27.3% children admitted for physical ailments. In children seen at the Child Guidance Clinic of the Madras Government General Hospital during the year 1964-1966, Raju *et al*. found that 22 of the 592 children were neurotics and 16 were hysterical. Later, in an urban survey of 109 families for psychiatric morbidity in children below 12 years, Lal and Sethi reported emotional disturbance in 55% families and 35.4% of the total children surveyed. Neurotic disorders were found in 11.0% of the total sample, but the clinical

states mentioned therein were extremely varied and did not follow any classificatory scheme.

In an another epidemiological study conducted by Manchanda and Manchanda, a total of 19 children (up to 12 years) from the Pediatric inpatient and Child Guidance Clinic (CGC) were diagnosed to be suffering from a neurotic disorder during a period of 11 months. Incidence of neuroses was 1.1% among pediatric inpatients and 8.2% in CGC. The incidence was higher in the females. 73.5% of children were in the age range of 10-12 years. None of them were below six years. Hysteria was the commonest diagnostic group (71.4%) in the present study. Therefore, it is likely that the findings observed for neurotic disorders in general, are more characteristic of hysteria. Other disorders in order of frequency were anxiety (16.3%) depression (6.1%) and phobia (4.1%). Obsessive compulsive neurosis was observed in one case only.

In another epidemiological study of possession syndrome (Venkataramaiah *et al*.) conducted in West Karnataka reported high prevalence rates of 51% in age group ,15 years and 28% in age group 15-25 years (n=718). In this study a house to house survey was conducted for a population of 1158 in west Karnataka to determine the prevalence of possession syndrome and to study people's attitude towards the same. One year period prevalence was found to be 3.7%.

You can discover more about a person in an hour of play than in a year of conversation" by **Plato**. Play therapy have major role in preventing the anxiety among preschool age children. Play therapy refers to wide variety of treatment methods all of which incorporate the use of play. For children, play is a natural method of learning, development and expression of feeling, thoughts and concerns. Play therapy offers a natural, safe and non-invasive method to foster and hasten recovery from anxiety

such as social anxiety, separation anxiety etc .It has been specifically designed to be developmentally appropriate for children and is based on the idea that children communicate and express inner feelings and conflict through play.

E.g. A crying child will stop crying when a toy is given to play. The value of play to a sick child in the hospital has long been recognized and if the hospital is to meet the physical, mental and emotional need of the child. It must also provide suitable play activity to the child to reduce the fear and anxiety of hospitalized children.

Play therapy is widely used to treat children's emotional and behavioral problems because of its responsiveness to their unique and varied developmental needs. Most children below the age of11 lack a fully developed capacity for abstract thought, which is a prerequisite to meaningful verbal expression and understanding of complex issues, motives, and feelings (Piaget, 1962). Thus, unlike adults who communicate naturally through words, children more naturally express themselves through the concrete world of play and activity. In play therapy, then, play is viewed as the vehicle for communication between the child and the therapist on the assumption that children will use play materials to directly or symbolically act out feelings, thoughts, and experiences that they are not able to meaningfully express through words (Axline, 1947; Kottman, 2001; Landreth, 2002; O'Connor, 2001; Schaefer, 2001).

**Saucier** stated that Play activities can be used in a multitude of setting and in multidisciplinary fashion **Ziegler** state that one of every four children will be hospitalized at least once before reaching school age. The physical and psychosocial stress of hospitalization may be influences by the child developmental level, causing behavior changes, somatic complaints and a prolonged hospital stay. Through the use

of careful developmental assessments, preoperative tours and therapeutic play techniques, fear can be allayed misconceptions correlated emotionally charged issues addressed and a positive self image created. Other purposes of therapeutic play are helps sick children gradually regain independence through enjoinment of group experiences. Creativity can be developed through playing with toys, games and group projects during the literature review, the investigator came across studies in relation to play activity and its effectiveness, in reducing the child anxiety, which are done in foreign settings. Studies done regarding the relationship between play activities and anxiety of hospitalized children are very few in India. Thus the investigators were motivated to carry out this study.

**Michal sholt, and tamil gavron, Haifa, Israel reports** that, clay therapy has many advantages. Clay therapy should be effective in very anger, anxious and child with attention deficit hyperactive disorder. Clay therapy helps the child to express his anger through rolling, folding, and pounding the clay. Clay therapy helps the children to move from crippling emotional experiences to flourishing opportunity for inner growth and healing.

**Knafo's (2002) concepts regarding clay work**, they are : a) procedural expressions through the experience of touch , movement, and the three-dimensional aspect of clay-work, b) construction and deconstruction process through clay-work, and c) the regress process.

Clay –work involves an intense and powerful tactile experience of touching and hap tic involvement touch was identified as one of the first sensory responses to develop in humans (**frank, 1957; montagu, 1978).** Tactile contact is actually the first mode of communication that an infant learns. For humans, the early stages of life are dominated by oral and skin contact between infant and caregiver (**hunter & struve,**

**1998**). Thus clay-work involves a very primal mode of expression and communication. Touch in clay-work also requires body movements in endless opportunities for touching and modelling. Thus clay-work makes possible an entire non-verbal language or communication for the creator, through which his or her mental realm, emotional life, and primary object relations can be expressed.

**(Henley, 2002) (White, 2006)** This research project attempted to explore some of the therapeutic benefits of using clay in play therapy. I have discovered that it undoubtedly helps a play therapy client express their emotions and this is due to the tactile nature of the clay. It is this mode of primal communication (touching) that helps emotions such as anger, greed, and grief be expressed in the clay. Using clay therapeutically allows you to grab an emotion and look at it in the face, touch it, shape it and feel it. It makes the intangible touchable. From my research and my own personal experience I have concluded that clay is extremely cathartic as clients have a strong emotional experience working with the clay. Due it is to its ability to be three dimensional, it can represent real life objects. It can lead to regression and according to Henley (2002) regression that occurs through clay work leads to a cathartic release. It is powerful and penetrating and it enables an enormous release and transformation without the client having to talk about what is going on. However the use of clay can tap into the unconscious mind and a therapeutic conversation about the visible product with the client can unlock the hidden memories. I have also seen how clay can act as a catalyst in encouraging group interaction and it helps with self esteem and self confidence. It also helps clients develop their social skills and helps the group members to support one another. It also can be instrumental in developing empathy. I feel that clay work that is symbolic or metaphoric can facilitate verbal communication and encourage people to speak about matters they wouldn't have normally disclosed.

Additionally I think because of need to focus on the clay when one manipulates clay can led to improved concentration.

**Clay therapy: A Manual of Therapeutic Applications of Clay with Children** provides counselors with over 50 unique clinical, child-centered techniques that enhance the therapeutic relationship.

- Improving **Problem Solving** Skills
- Improving **Decision Making** Abilities
- Developing **Impulse Control**
- Discovering and Enhancing **Self Esteem**
- Developing and **Utilizing Patience**
- Resolving Dilemmas of **Family Life** and Growing Up

**"Safety and security don't just happen; they are the result of collective consensus and public investment. We owe our children, the most vulnerable citizens in our society, a life free of violence and fear" (Nelson Mandela).**

Illness and hospitalisation are the first crisis children must face. Especially during the early years, children are particularly vulnerable to the crises of illness and hospitalisation because stress represents a change from the usual state of health and environmental routine and children have a limited number of coping mechanisms to resolve stressors.

The paediatric population in hospital today has changed dramatically over the last 2 decades. Although there is a growing trend towards shortened hospital stays and outpatient surgery, a greater percentage of the children hospitalised today have more serious and complex problems than those hospitalised in the past.

## 1.2 STATEMENT OF THE PROBLEM

A study to assess the effectiveness of clay therapy on anxiety among hospitalized preschool children at paediatric medical ward in institute of child health and research centre, Government Rajaji hospital Madurai.

## 1.3 OBJECTIVES OF THE STUDY

1. To assess the level of anxiety among hospitalized preschool children in experimental group and control group.
2. To assess the effectiveness of clay therapy among hospitalized preschool children in experimental group.
3. To compare the level of anxiety among hospitalized preschool children in experimental group and control group.
4. To associate the level of anxiety among hospitalized preschool children with selected socio-demographic variables in experimental group and control group.

## 1.4 HYPOTHESES

- $H_1$: There is a significant difference between the level of anxiety among hospitalized preschool children in experimental group before and after clay therapy.
- $H_2$: there is a significant difference between the post test level of anxiety among hospitalized preschool children in experimental group and control group.
- $H_3$: There is a significant association in the level of anxiety among hospitalized preschool children with the selected socio-demographic variables in experimental group and control group.

## 1.5 OPERATIONAL DEFINITIONS

- **Effectiveness:** In this study it refers to reduction in anxiety symptoms scores of preschool children as measured by hospital observed behaviour checklist on children's anxiety.
- **Clay therapy:** In this study, it refers to a form of supervised play therapy in which researcher teaches the preschool children about making different clay models like human models, animal models, and cartoon models.
- **Level of Anxiety**: In this study, anxiety refers to separation, gaze behaviour, loss of control, bodily injury, co-operation among hospitalized preschool children as measured by hospital observed behaviour checklist on children's anxiety.
- **Hospitalised preschool children: I**n this stud**y,** it refers to admission of children between the age of 3-6 years in Paediatric Medical Ward, Institute of Child Health and Research Centre.
- **Paediatric medical ward** : In this study, it refers to the place where the children are admitted for diagnostic procedures and treatment in Institute of Child Health and Research Centre, Government Rajaji Hospital at Madurai.

## 1.6 ASSUMPTION

- Hospitalized children are susceptible to develop anxiety.
- Children are explicit the reactions of hospitalization : separation anxiety, social anxiety, depression (exposure to new environment such as doctors, injections etc.)

## 1.7 DELIMITATION

The study is delimited to:

- The sample size was limited to 60.
- The data collection period was limited to 6 weeks.
- The study was limited to the hospitalised preschool children (3-6years) and the children to be stayed in the hospital seven days from the date of admission in paediatric medical ward.

## 1.8 PROJECTED OUT COME

- The study helps to identify the level of anxiety among hospitalized preschool children.
- Clay therapy reduces anxiety of hospitalized preschool children.

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# *Review of Literature*

# CHAPTER - II

# REVIEW OF LITERATURE

"Review of literature is an important steps in the development of a research project. It involves systematic identification, location scruting and summary of written materials that contain information on research problems**." [Polit and Hungler 1991] "The literature is reviewed to summarize knowledge for use in practice or to provide a basis for conducting study" (Nancy Burns 2002).**

"A literature review is an compilation of resources that provides the ground work for further study." **[Laura a. Talbot 1995]**

The review of literature is defined as a broad, comprehensive in-depth. Systematic and critical review of scholarly publications, unpublished scholarly print materials, audiovisual material and personal communication". **[B T Basavanthappa 2005]**.

This chapter attempts to preset a broad review of the studies conducted, the methodology adopted and conclusions drawn by earlier investigation, it helps to study the problem in depth. The literature reviewed in the present had been presented under the following heading.

**PART - I**

- 2:1 Literature related to anxiety in children.
- 2:2 Literature related to effectiveness of clay therapy.
- 2:3 Literature related to clay therapy on anxiety in children.

## 2.1 LITERATURE RELATED TO ANXIETY IN CHILDREN

**KHalilzadeh H, KHalkhali HR, et.al., (2013)** study conducted to determine the effect of family centered care on the anxiety of hospitalized children with urinary tract infection. This study is a quasi-experimental study. Sampling is available probability and the estimated number of samples in each group is 40 (totally 80 person). Questionnaire consisted of two parts, demographic profile (14 questions) and Spielberger trait anxiety questionnaire (40 questions). To determine the scientific validity of the questionnaire's content validity and to determine the scientific reliability, Cronbach's alpha test was used. Control group received the usual care and experimental group family-based care. Spielberger trait anxiety questionnaire was completed by parents in both groups at admission, 48 hours after admission and at discharge and analyzed using statistical test. Research findings suggest that the mean parental anxiety in control group at discharge (58/6 ± 82/48) and intervention group (11/7 ± 15/33). The t-test ($p < 0/0001$) show significant difference between two groups anxiety mean after intervention. Implementation of family-centered care over usual care approach is to reduce anxiety. Therefore, this method can be used in the care of hospitalized children.

**Kashani, Javad.H., Reid, John.C., Vaidya. et.al., (2011)** conducted a study to group of 100 children, who were admitted to an inpatient child psychiatric center, and their parents, were interviewed with several questionnaires to assess levels of anxiety. The group consisted of 73 boys and 27 girls aged 7 to 12 years. No differences in age, sex, and socioeconomic status were found among the children. Twenty-one children were severely anxious, 48 children were possibly anxious, and 31 children had no anxiety diagnosis. The Personality Inventory for Children found parental discord and disharmony in the families of severely anxious children. Parents

of children with severe anxiety had significantly higher hostility scores than the other parents. This suggests that hostile or critical parental attitudes may lead to a child's perception and anticipation of danger, which in turn leads to anxiety. The importance of understanding the influence of family dynamics on the onset of mental disease is highlighted by these results.

**Hamidreza Roohafza, Afsaneh Pirnia, (2009).** conducted a study to investigate anxiety levels in two groups of children exposed to nurses with white vs. colored clothing in a university hospital in Iran. Hospitalisation causes anxiety in children and it is documented that nurses have an important role in alleviating children's distress and anxiety. Nurses characteristics, including their clothing is a factor that affects quality of care through child–nurse relationship. Children ($n = 92$) aged 7–15 years old hospitalized for 3–5 days in paediatric surgery ward were exposed to nurses in white or coloured clothing. Children's anxiety was assessed on admission and at discharge using Revised Children's Manifest Anxiety Scale. Children exposed to white nursing uniforms showed higher anxiety levels compared with children exposed to coloured nursing clothing ($p \leq 0{\cdot}05$). Besides coloured nursing clothing, female sex, age >11 years old (guidance school) and living in families with more than four members were predictors of lower global anxiety scores.

**Mehrangiz SHoaakazemi, Nayereh Gholami et.al., (2012)** study conducted to determine the effect of group play therapy on separation anxiety disorder in 7-9 years old children in Tehran. Sampling was purposeful in which 20 children, who were diagnosed as separation anxiety disorder, were selected, and randomly divided into two experimental and control groups (10 subjects each). Experimental group received 9 sessions of group play therapy once a week Tools were: 1) The Raven's Colored Progressive Matrices Test. A test of non-verbal intelligence for young

children with36 matrix designs. 2) The Spence Children's Anxiety Scale (SCAS) with 44 questions and 6 subscale variance &covariance analysis were used for data analysis. The results of covariance analysis showed the significant effect of group play therapy on reduction of separation anxiety disorder in children in post test and follow up stage. ($p<0.05$).

**Teichman Y, Lerman M**. **et.al., (2010)** This study suggested that the child's emotional reaction to hospitalization is determined by personal, interpersonal and environmental factors. The personal attribute investigated was the child's predisposition to experience anxiety, namely, trait anxiety. The interpersonal influence was the perceived level of maternal anxiety, and the environmental influence was type of hospitalization-traditional hospital or day clinic. Results indicate that the child's level of trait anxiety predicted the level of experienced anxiety and so did perceived maternal anxiety. Type of hospitalization did not influence the level of anxiety, but children with high trait anxiety who attributed to their mothers a high level of anxiety reported more anxiety in the day clinic rather than in the hospital. The findings imply that, when helping children and families deal with hospitalization, personal, interpersonal and environmental factors have to be considered.

**Sanjiv K. Bhasin, Rahul Sharma, N. K. Saini (2010)** study conducted to assess the depression, anxiety and **stress** (DAS) among adolescent school students belonging to affluent families and the factors associated with high levels of DAS. Adolescent students belonging to class 9–12$^{th}$ selected for the study. DASS-21 questionnaire was used for assessing DAS. The scores in the three **domains** (DAS) were found to be remarkably correlated. It was seen that depression was significantly **more** among the females (mean rank 132.5) than the males (mean rank 113.2),

p=0.03. Depression (p=0.025), Anxiety (0.005) and Stress (p<0.001) were all significantly higher among the 'board classes' *i.e.*, $10^{th}$ and $12^{th}$ as compared to the classes $9^{th}$ and $11^{th}$. All the three (DAS) were found to have an inverse relationship with the academic performance of the students. Depression and Stress were found to be significantly associated with the number of adverse events in the student's life that occurred in last one year. .

**Luigi Mazzone**[*], **Benedetto Vitiello.et al., (2007)** The study conducted to assess the prevalence of anxiety and the relationship between anxiety and school performance were examined among elementary, middle, and high school students. Samples of elementary (N = 131, age 8–10 years), middle (N = 267, age 11–13 years), and high school (N = 80, age 14–16 years) children were recruited from four public schools in a predominantly middle-class community in Catania, Italy. Children completed the Multidimensional Anxiety Scale for Children (MASC). T-scores were computed for the MASC total scores, and considered to be in the anxious range if 65 or above. Current academic grades were obtained from school records. Results of the 478 children, 35 (7.3%) had a MASC T-score in the anxious range. The rate of children in the anxious range was 2.3% in elementary, 7.9% in middle, and 15.9% in high school ($\chi^2$ = 7.8, df = 2, p < 0.05), and was 14.1% among students with insufficient grades, 9.4% among those with sufficient grades, and 3.9% among those with good or very good grades ($\chi^2$ = 11.68, df = 2, p < 0.01).

**Titi Xavier** A quasi-experimental study of assessing the effectiveness of play activities in reducing the level of anxiety among hospitalized children in a selected hospitals at Bangalore was under taken. The convenient sampling technique was used to select the sample for the study. Data was collected by using hospital observed behavior check list. The data was analyzed by using descriptive and inferential

statistics like mean, median, standard Deviation, chi-square, and student 't' test. The findings shows that children's was anxious in the pre-test and were as in the post-test shows that children's was not anxious or reduced anxiety the mean post test scores was significantly higher than the mean pre-test scores t = p<0.001so there was a significant association between findings and the selected demographic variables as estimated by $x^2$ The study concluded that children's was anxious in the pre-test and were as in the post-test shows that children's was not anxious or reduced anxiety so, it indicates that play activities was effective.

**F. Naderi, and P. Asgari et.al., (2010)** The present study was purposed to examine the Efficacy of Play Therapy on Attention Deficit Hyperactivity Disorder (ADHD), Anxiety and Social Maturity in 8-12 years old male and female children. The sample subsumed 80 boys and girls whom were selected randomly via simple sampling procedure from clientele children whom were identified and diagnosed for ADHD and Anxiety in counseling clinics. The subjects randomly allocated to two groups, giving equal chance to every client to be included in each group: the experimental and control group. Experimental group was involved in play therapy for ten sessions; 1 h each. Control group did not. The results authenticated that play therapy as an effective therapeutic procedure is a conceivable intervention for children experiencing a broad range of problems such as ADHD and anxiety involving no any significant risk.

**Mary Kaminski, Teresa Bellini & Joel Wish (2002**) child life therapy programs and pet therapy programs are often used in pediatric hospital settings to provide emotional support and diversion; however there is little research about their efficacy. How play and pet therapy affect children was examined in this study of 70 hospitalized children. Self reported moods, displayed effect, amount of touch, heart

rate, blood pressure, and salivary cortisol were measured. Pet therapy likely provides an additional supportive activity for hospitalized children.

Though the example is one of nondirective play therapy, a wide range of variation exists under the heading of play therapy.

**Vessey J A, Mohan MM (2010)** conducted a study on therapeutic play and hospitalized child. It has long been recognized that there are many and varied definitions of play. This article briefly explains reviews normative play theory. Differing it. From its counterpart, therapeutic play three forms of therapeutic play (emotions outlet play, instructional play, and physiologically enhancing play) are described and clinical examples are given

**Ribeiro C A (1999)** conducted a study on the effects of the use of therapeutic play by the pediatric nurse on the behavior of recently hospitalized children. This work describes the realization of the results of one experimental research accomplished with children from 3 to 5 years of age, recently hospitalized using the therapeutic play. The results showed that it helped children behave more according to what is expected of this 3 to 5 age group, as well as show sign that they had adopted or presented ego strength.

**Belig R. Yolton KA. Nissen HL (2011**) conducted a study on medical play and preparation: question and issues. Medical play and preparation have become increasingly visible components of psychological programming for children in health care settings. Each strategy varies to the extent to which adult's structure and directives, which may influence children's response and post hospital adjustment. Medical play and preparation represent different philosophies and theories of children's learning.

**Doverty N. (2012)** conducted a study on therapeutic use of play in hospital. Children can suffer much anxiety and stress on entering the hospital environment. Play activities, in all its forms, can help to alleviate such stress, facilities smoother adjustments to the new and potentially frightening surroundings

**Lizasoin O, Polaino A. (1999**) conducted a study on reduction anxiety in pediatric patients; effects of a psycho pedagogical intervention program. A psychological intervention programs are used as a resource to improve children's life in hospital and to prevent the negative effects of hospitalization one of these negative effects is the children's anxiety. The statistical analysis showed the effectiveness of this program in order to reduce and prevent the emergence of anxiety symptoms. Therefore, its generalization and use are recommended

**Hall D, Clearly J. (1998**) conducted a study on the development of play for children in hospitals. Play in hospital has developed alongside of changes toward a more family centered model of care. The recreational and educational role of play has been significantly extended toward a therapeutic purpose. This article considers the relationship between play workers and teachers, nurses and parents, and presents some examples of the use of play in hospital.

**Side Kazemi, and Leila Ka Shani. et.al., (2011**) This study is designed to evaluate the role of music therapy on the level of anxiety in children aged 912 years old, in an academic hospital in Gorgan, northeast of Iran. Sixty hospitalized children were categorized into the intervention (case=30) and the control groups (N=30) by using a simple randomized method result showed that the anxiety scores between the control and the intervention groups had no significant difference before the application of the music.

**Kemper & Wornham, 2001**. Many studies have investigated the effects of massage therapy, demonstrating improvements in anxiety, depression, and cooperation in hospitalized children. Additionally, chronic illness-related symptoms significantly improve following therapy. In one study, cystic fibrosis patients experienced reduced anxiety, increased mood, and increased peak airflows. For such reasons, massage therapy is increasingly being incorporated into the health care field. Infants undergoing massage therapy were found to spend more time in active/awake states, cry less, and have lower stress levels (as measured by cortisol levels) as compared with rocking.

## 2.2 LITERATURE RELATED TO THE EFFECTIVENESS OF CLAY THERAPY

**Heejeong Jang, Sunnam Choi, (2012)** The participants in this study were 16 adolescents in an educational welfare program in a city middle school in Gyeonggi Province. The participants' ego-resilience was measured before the first session after the last session, and in a follow-up test one month after the end of the program. Means and standard deviations from the tests were compared, and repeated measures analysis of the variance and simple main effects were computed using SPSS 18.0.The significance of this study lies in the finding that clay-based group art therapy produces positive effects on the adolescents' ego-resilience, a personal trait that helps with mental and emotional adaptation in a changing and conflicting environment.

**(Henley, 2002) (White, 2006**), This research project attempted to explore some of the therapeutic benefits of using clay in play therapy. He has discovered that it undoubtedly helps a play therapy client express their emotions and this is due to the tactile nature of the clay. It is this mode of primal communication (touching) that

helps emotions such as anger, greed, and grief be expressed in the clay. Using clay therapeutically allows to grab an emotion and look at it in the face, touch it, shape it and feel it. It makes the intangible touchable. He has concluded that clay is extremely cathartic as clients have a strong emotional experience working with the clay.

**Hall, Kaduson and Schaefer (2002**:) it says ,list clay therapy as part of game called the "Power animal technique" where children construct a desired animal in clay to create a positive symbol of strength. Pauls Phillips (1994) in the American journal of art therapy reviews a video on the use of clay therapy when working with a boy and his anger. Robert Racusin (2000) includes clay in the materials he used for his brief psychodynamic psychotherapeutic interventions with children but does not elaborate on how specifically clay is used with particular presenting problems. Kahn (1996) working.

**Timothy Lawver, and Kelly Blankenship, et.al., (2008)** Play therapy is a treatment modality in which the therapist engages in play with the child. Its use has been documented in a variety of settings and with a variety of diagnoses. Treating within the context of play brings the therapist and the therapy to the level of the child. By way of an introduction to this approach, a case is presented of a six-year-old boy with oppositional defiant disorder. The presentation focuses on the events and interactions of a typical session with an established patient. The primary issues of the session are aggression, self worth, and self efficacy. These themes manifest themselves through the content of the child's play and narration of his actions. The therapist then reflects these back to the child while gently encouraging the child toward more positive play.

**Cindy and doug lietz (2008)** The subject of using polymer clay and other hobbies as a **stress** management technique has been on my mind a lot lately. In fact

just today I had a bit of a conversation with a very sweet lady (Betsy) that was telling me how she started **making polymer clay** candle holders as a way to stay mentally positive during her battle with thyroid cancer. Here's a link to the article page where we were chatting if you want to read **more** about her inspirational story: How To Make Polymer Clay Canes Betsy's wonderful attitude in coping with her illness reminded me of how **art** therapy can really help with the healing process. Here's a couple of other stories I've heard recently of others who have found comfort in polymer clay.

## 2.3 LITERATURE RELATED TO CLAY THERAPY ON ANXIETY IN CHILDREN

**Ghazaal Zaynaliyan1, Mo hammadreza Abedi et.al., (2014)** Research conducted to determine the effect of paint therapy and clay therapy on separation anxiety disorder symptoms in pre-school children as well as to compare the two mentioned therapies. The research methodology was individually done and child anxiety symptoms were studied by CSI-4 questionnaire. Research testers were six children with separation anxiety disorder randomly selected from those who visited Golestan Zendegi and Saf clinics in Isfahan through using a diagnostic interview and children's separation anxiety scale. The six children were divided in to three groups of two: painting therapy; clay therapy as well as control group who received no treatment. Research findings showed that according to data visual analysis based on descriptive statistics and visual analysis paint therapy and clay therapy were effective in reducing separation anxiety disorder symptoms in intervention step as compared to baseline ($P<0.5$); in addition, there was no significant difference between the two mentioned treatments ($P<0.5$). However, there was seen a difference between

experimental and control groups. The research results show the effectiveness of paint therapy and clay therapy on reducing separation anxiety disorder.

**Parisa rahmai (2010)** The research Data was collected from thirty six year old children with the objective to examine the effectiveness of clay therapy on reducing anxiety in them. For examining children's anxiety CSI-4 test developed by Gadow & Sprafkin, (1994) was employed which was answered by parents of children. Data was subjected to one- way analysis of variance. It showed significant difference on anxiety scores among groups ($F = 74.2$, $p < 0.01$). Scheffe test was employed to analyze pairs of means to see if there is a difference, which showed significant difference on anxiety of control group in post-test comparing with clay group and narrative group. No significant difference was found among clay group and narrative group respectively.

**Courtney McCullough, Mahopac, NY(2009),** case study conducted over a 12-year-old boy who participated in an 8-month art therapy program conducted in the South Bronx, a neighborhood of New York City. The author examines the use of transitional objects in a case study of a 12-year-old boy, documenting the role of art therapy (clay) in helping the boy cope with the trauma of his parents' recent separation and divorce. Transitional objects emerged spontaneously as the boy integrated the transition that the divorce of his parents created; these objects were elaborated through various art materials (clay) and their use eventually de -creased as the boy achieved a more secure sense of self. The case illustrates the therapeutic value of transitional objects and transitional space in therapy.

**Sajani, V. & Manickam, L.S.S. (2000).** An Experiential Study conducted an Art Therapy Programme for Adolescence. It was an intensive 5 days programme. It was meant for adolescents studying in high school classes. Several Schools in

Thiruvananthapuram City were contacted and information about the art therapy programme was provided. Twenty students responded. But only 12 participants turned up for the programme. There were seven girls and five boys. Their age ranged from 10 to 16 and the mean age was 13.5. It was conducted at the Counseling and Psychotherapy Centre, CAPS, Thiruvananthapuram from 8.30 am to 4 pm during the summer holidays. The participants meditated on these ragas and identified the feelings to the ragas. The identified feelings were sokam (Kindness), and santham (calmness). Later the violinist explained about different ragas. The participants reported that they were too much involved with the aroused emotions and it was difficult for them to get out of one.

**K. Sekar, & Prabu, (2007)** case study conducted on tsunami traumatic child Jennifer made a clay model of her mother during the exercise on clay modeling, whom she lost at the time of Tsunami. Jennifer, prior to the incident, used to be quite a chirpy girl. However her friends say that she rarely laughs anymore and requests her friends to leave her alone. During the exercise on 'Clay Modeling' Jennifer made a clay model of her deceased mother and shared with the group how she saw her mother getting washed away by the Tsunami waves. Everyone from the group showed concern towards her which made Jennifer feel better. The facilitator addressed her distress by asking her to gradually try to get over the grief of her mother's death and take a control over her life. By the second stage of the exercise Jennifer had eased off. In the future she said she would like to go to the city and take up a good job. Jennifer is good at dancing and singing. She wants to get professional training in singing and dancing and in the future wishes to open a music school in the name of her mother.

**Heejeong Jang, Sunnam Choi, (2012)** The participants in this study were 16 adolescents in an educational welfare program in a city middle school in Gyeonggi Province. The participants were divided into two groups of 8 – the experimental group and the control group – and received a total of 18 sessions of the therapy program, once a week, for 80 min in each session. The participants' ego-resilience was measured before the first session after the last session, and in a follow-up test one month after the end of the program. Means and standard deviations from the tests were compared, and repeated measures analysis of the variance and simple main effects were computed using SPSS 18.0. It was found that clay-based group art therapy produced positive effects on the ego-resilience of low SES adolescents. The significance of this study lies in the finding that clay-based group art therapy produces positive effects on the adolescents' ego-resilience, a personal trait that helps with mental and emotional adaptation in a changing and conflicting environment.

**Amran Hassan (2012)**. This study represents a single Quasi-experiment predisposed to a qualitative 'art-based approach' by collecting samples from a school in Pahang which is involved in the Emotional Expressive Programmer. The selection of sample is purposive and a total of 38 form 6 students were selected by the School Counselor and Coordinator of Form 6 as the (special) experiment group of school students undergoing pressure or stress. As a result, all the participants of this experiment stated a feeling of relief at being able to articulate suppressed emotions all this time through clay therapy and an increased mental motivation to continue with studies even though it was held for a short period.

## PART - II

## CONCEPTUAL FRAMEWORK

**Conceptual framework deals with the abstraction which are assembled together by virtue of their relevance to a common theme [Polit and Hungler 1999]** A conceptual framework or model is made up of concepts that are mental image of a phenomenon. These concepts are linked together to express their relationship between them.

**A model is used to denote the symbolic representation of concepts** (Jacqueline Fawcett, 1987). The study is based on the concept to assess the effectiveness of clay therapy in reducing the anxiety of hospitalized preschool children. The investigator adopted the **Widenbach's Theory of helping art of clinical Nursing**, 1964 for a conceptual framework.

**Widenbach's prescriptive theory** is directed toward an explicit goal. It consists of three factors central purpose, prescription and realities. A Nurse develops a prescription based on a central purpose and implements it according to the realities of the situation.

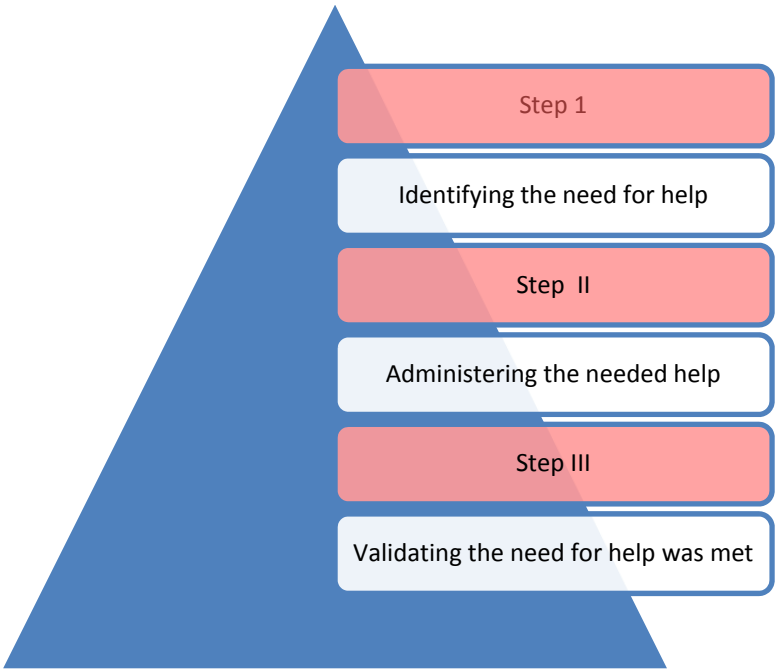
Ernestine Wiedenbach view nursing practice as an art based on goal directed care, her vision of nursing practice closely parallels the assessment, implementation and evaluation steps of the nursing process. She identifies seven levels of awareness (sensation, perception, assumption, realization, insight, design and decision).

The conceptualization of nursing practice according to this theory consists of three steps as follows.

**Step I : Identifying the need for help**

**Step II : Administering the needed help**

**Step III : Validating the need for help was met**




**(Fig- 1) Conceptualization of nursing practice**

This theory views nursing as an art based on the goal or central purpose. It consist of 3 factors, Central purpose, Prescription and realities.

➲ **Central purpose:**

It refers to what the nurses want to accomplish: According to this study the central purpose is to assess the effectiveness of clay therapy in reduction of the level of anxiety among hospitalized children

**STEP I : IDENTIFYING THE NEED FOR HELP**

This step involves determining the need for help. The children with anxiety is identified by screening with hospital observed behavior check list on anxiety. The convenient sampling method is used to assign for experimental and control group.

Pre Interventional level of anxiety is measured for both groups using combined demographic data and hospital observed behavior check list on anxiety.

**STEP II: ADMINSTRATION OF THE NEEDED HELP**

After the pre assessment level of anxiety is measured in experimental and control group, clay therapy (making animal, cartoon, birds model etc.,) is given for the experimental group.

This refers to the provision of required help to fulfill the identified need. It has two components.

- Prescription
- Realities

**Prescription**

In this study prescription refers to clay therapy.

**Realities**

| | | |
|---|---|---|
| Agent | : | Investigator |
| Recipient | : | Hospitalized Children in paediatric ward (3 to 6 years) |
| Goal | : | To reduce the level of Anxiety among hospitalized children |
| Means | : | Clay therapy (making animal, cartoon, birds model etc.,) |
| Framework | : | Paediatric medical ward in the hospital setting. |

**STEP III: VALIDATION OF THE NEED FOR HELP WAS MET**

It is accomplished by means of measuring post assessment level of anxiety after clay therapy. This was done by hospital observed behavior check list for children and identified whether there is a reduction in the level of anxiety among hospitalized children.

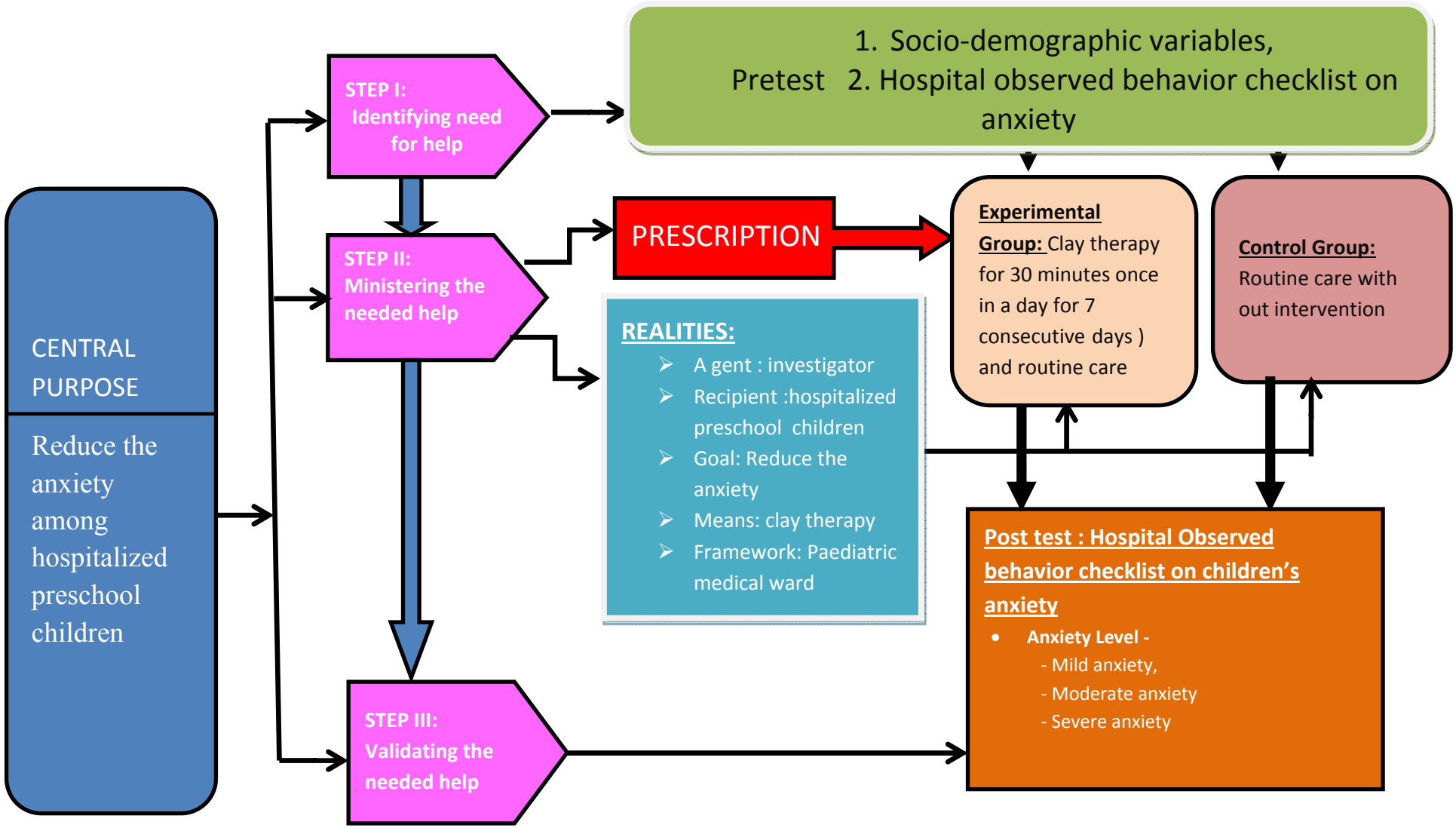



**Fig.: 1 MODIFIED WIDENBACH'S PRESCRIPTIVE THEORY (1964)**

# *Methodology*

# CHAPTER - III

# METHODOLOGY

The methodology of research indicates the general pattern of organizing the procedure of gathering valid and reliable data for an investigation (Kothari C.R., 2004).

This chapter provides a brief description of the methods adopted by the investigator in the study. It includes the research approach, research design, the setting, sample and sampling technique .It further deals with the development of the tool and procedure for data collection and plan for data analysis.

This chapter deals with the description of methodology and different steps that are taken for gathering and organizing data for the investigator to assess the effectiveness of clay therapy in reducing Anxiety of the hospitalized children.

## 3.1 RESEARCH APPROACH

It is a **quantitative study** in which **True experimental design** was used. This study aims at assessing the effectiveness of clay therapy in reducing the anxiety of hospitalized children.

## 3.2 RESEARCH DESIGN

According to Kothari .C.R. (2003) "A research design is defined as the overall plan for collecting and analyzing data, including a specification for enhancing the internal and external validity of the study".

The investigator used **True experimental design - pretest post test control group design** for this study. There was a manipulation for the subjects with a control group and randomization.

| Group | Pre Test | Intervention | Post Test |
|---|---|---|---|
| Experimental Group | $0_1$ | X (clay therapy) | $0_2$ |
| Control group | $0_1$ | Routine care | $0_2$ |

**Tab. 1: SCHEMATIC REPRESENTATION OF RESEARCH DESIGN**

$O_1$ - Pre test level of anxiety among Hospitalized preschool children in experimental and control group.

X – Clay therapy (30 min once in a day for 7 consecutive days)

$O_2$- Post test level of anxiety among Hospitalized preschool children in experimental and control group.

### 3.3 VARIABLES

The variable is "an attribute of a person or object that varies, that is taken a different values". (Polite and hunger)

**Independent variable**

The independent variable is the variable that stands alive and is not dependant on another. It is the cause for an action.

In the present study, the independent variable is the clay therapy.

**Dependent variables**

Dependent variable is the effect of the action of the independent variable and cannot exist by itself.

In the present study, the dependant variable is the anxiety of the hospitalized children.

## 3.4 SETTING OF THE STUDY

The setting is the physical location and condition in which data collection takes place in the study. (Polit and Hungler, 1995)

The study was conducted in the **pediatric medical Ward** at Institute of Child Health and Research Centre, Government Rajaji hospital Madurai.

## 3.5 STUDY POPULATION

The population is defined as the entire aggregation of cases that meet a designed criterion.

**TARGET POPULATION**

**Target population:** The target population is the entire population in which the researcher is interested and to which he or she would like to generalize the respect of a study.

The target population of the present study comprises of hospitalized preschool children.

**ACCESSIBLE POPULATION**

Preschool children admitted in the medical ward at Institute of Child Health and Research Centre, Madurai.

## 3.6. SAMPLE AND SAMPLE SIZE

**Polit and Hungler (1995)**

The sample is a subset of the population selected to participate in a research study.

The children those who are admitted in pediatric medical ward between the age group of 3-6 years at Institute of Child Health and Research Centre, Government Rajaji Hospital ,Madurai.

The sample size for the present study is composed of **60 preschool children (30 Experimental group and 30 Control Group)** who is admitted in Institute of Child Health and Research Centre, Madurai.

## 3.7 SAMPLING TECHNIQUE

Sampling is the process of selecting a portion of the population to represent the entire population. Simple Random sampling (lottery method) technique was used to select the 60 subjects from the target population.

## 3.8 CRITERIA FOR SELECTION OF SAMPLES

**Inclusion criteria**

- Children in the age group of 3 to 6 years.
- Children who are admitted in medical ward irrespective of any illness.
- Children who can understand and able to speak Tamil.

**Exclusion Criteria**

- Children who are blind, mentally and physically challenged.
- Children those who are admitted for only observation.
- Children who are having skin allergy.
- Children who critically ill and unconscious.

## 3.9 DEVELOPMENT&DESCRIPTION OF THE TOOL

Data collection tools are the procedures or instruments used by the researcher to observe or measure key variables in the research problem. Observed Behavior Check list on children's anxiety was selected to assess the anxiety level of hospitalized preschool children. It was considered to be the most appropriate instrument to elicit the response from subjects who are able to understand Tamil. The following steps were carried out in the preparation of the tool.

1. Literature review
2. Conceptual framework
3. Discussion with experts
4. Preparation of blue print

The tool was organized into two sections.

**Section A:** Deals with demographic data.

Section A consist of demographic variables of age, gender of the child, birth order, religion, family type, residence, income, educational status of the father, education of the mother, education of the child, dietary pattern.

**Section B: hospital observed behavior check list on children's anxiety**

A hospital observed behavior checklist was prepared consisting of 50 items were given score of 1,2,3,4 & 5, for each behavior.

**SCORING PROCEDURE**

The scoring system is divided into following categories

| | | |
|---|---|---|
| 01 to 50 | – | No Anxiety |
| 51 to 100 | – | Mild anxiety |
| 101 to150 | – | Moderate Anxiety |
| 151 to 200 | – | Severe |

201 to 250 – Profound Anxiety

The scoring of each item of hospital observed behavior checklist as follows;

| ITEMS | ITEMS |
|---|---|
| Strongly disagree | 1 |
| Undecided | 2 |
| Disagree | 3 |
| Agree | 4 |
| Strongly agree | 5 |

This instrument consist of 50 items. Maximum score for each item is 5. So the total obtained score is 250. Decrease of score denotes more coping abilities of preschoolers towards hospitalization .

## 3.10 TESTING OF THE TOOLS

### Validity of the Tool

Validity is the degree to which an instrument measures what is intended to measure (Polit and Hungler. 1995)

The content of the tool was validated by the experts in the field of medicine and Nursing. The suggestions of the experts were incorporated in the study. Minimal modification was made in the section A & Section B of the tool. After the change the tool was finalized. The refined modified tool was used for data collection and content validity was obtained.

### Reliability of the Tool

The reliability of the tool was assessed by test-retest method reliability value is 0.85.This correlation coefficient is very high and it is a good tool for assessing the effectiveness of clay therapy in reducing the level of anxiety hospitalized preschool

children at Paediatric medical ward in Institute of Child Health and Research Centre Government Rajaji Hospital, Madurai.

### 3.11 ETHICAL CONSIDERATION

This study was conducted after the approval from the ethical committee Madurai Medical College, Madurai. All respondents were carefully informed about the purpose of the study and their part during the study and how the privacy was guarded. Ensured confidentiality of the study result. Thus the investigator followed the ethical guidelines which were issued by the research committee. Written permission was obtained from all participants.

### 3.12 PILOT STUDY

A pilot study is a small scale version or a trial run for the major study. The function of this pilot study was to obtain information for improving the project or for assessing its feasibility.

The pilot study was conducted after getting formal administrative permission and ethical clearance. The pilot study was conducted at the Paediatric Medical Ward in Government Rajaji Hospital Madurai for the period of one week. Formal permission was obtained from the Director of Institute of Child Health and Research Centre Madurai. Ten samples those who fulfilled the inclusion criteria were chosen by simple random sampling technique (lottery method). Informed consent was obtained from the mothers of the sample and data was collected. The instrument was found reliable for proceeding with the main study. The other opinion and suggestion were incorporated in the main study to accomplish the objectives of the study.

## 3.13 CLAY THERAPY AS AN INTERVENTION TOOL

Clay therapy is based on the ideas that the creative process of model making is healing and life enhancing and is a form of nonverbal communication of thoughts and feelings.

***American Art Therapy Association, 1996***

Interventions that promote resilience makes sound preventive sense**.** Children need a safe way to communicate their anxieties, and often the best way to cope can be found in the trappings of childhood clay. Children and adolescents don't always have the words to express what they are going through and are typically created by nature – both of which make them well-suited for clay therapy intervention. Activities based in creative clay therapies engage them in a process that builds self-esteem as well as problem solving and life skills. Their creativity helps them access and explore pent-up emotions.

| | | |
|---|---|---|
| Intervention | : | providing clay therapy |
| Frequency | : | one session at morning |
| Duration of session | : | 30 minutes |
| Duration of therapy | : | seven consecutive days |

During the intervention the researcher observed and supported the children.

## 3.14 DATA COLLECTION PROCEDURE

After obtaining the formal permission from the Head of the Department child Health Nursing and Principal College of Nursing, also obtain the Permission from The Director, Department of Paediatrics, Institute of Child Health sand research centre, Government Rajaji Hospital Madurai. The investigator explained the purpose of the study and informed written consent is obtained from each subjects. Collection

of demographic data among the mother of a children and, their anxiety level is assessed by using hospital observed behavior checklist on anxiety.

On the first day of admission in pediatric medical ward, the mothers/ caregivers of children were approached and the consent was obtained after fully explaining the procedure of the study and the rights of the clients. Based on the criteria for sample selection the subjects were selected using purposive sampling method. 12 samples were selected for each week of study. Pretest was done to evaluate the level of anxiety using Hospital observed behavior checklist on children's anxiety, after the ward rounds the clay therapy was provided to experimental group for 30 minutes once in a day. The same intervention was given for a period of 7 consecutive days. The post test assessment was conducted for both groups using the same assessment scale on the seventh day of the study. The same sample selection procedure and intervention was adapted to the further four groups. The data collection period was 6 weeks and data was collected on all 7 days of the week.

## DATA COLLECTION PROCEDURE

### FROM 12th AUGUST 2014 TO 15th SEPTEMBER 2014

| DATE | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 SUBJ -ECTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Group1 | | | | | | | | | 12 SUBJ -ECTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Group2 | | | | | | | | | | | | | | | | 12 SUBJ -ECTS | | | | | | | | | | | | | | | | | | | | |
| Group3 | | | | | | | | | | | | | | | | | | | | | | | 12 SUBJ -ECTS | | | | | | | | | | | | |
| Group4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 SUBJ -ECTS | | | | | |
| Group5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

## KEYS

PRE TEST

POST-TEST

INTERVENTION

## 3.15 PLAN FOR DATA ANALYSIS

The data were planned to be analyzed in terms of the objectives of the study using descriptive and inferential statistics.

**Descriptive statistics include**

1. Frequency and percentage distribution of demographic variables.
2. Mean and standard deviations of pre assessment and post assessment knowledge scores.

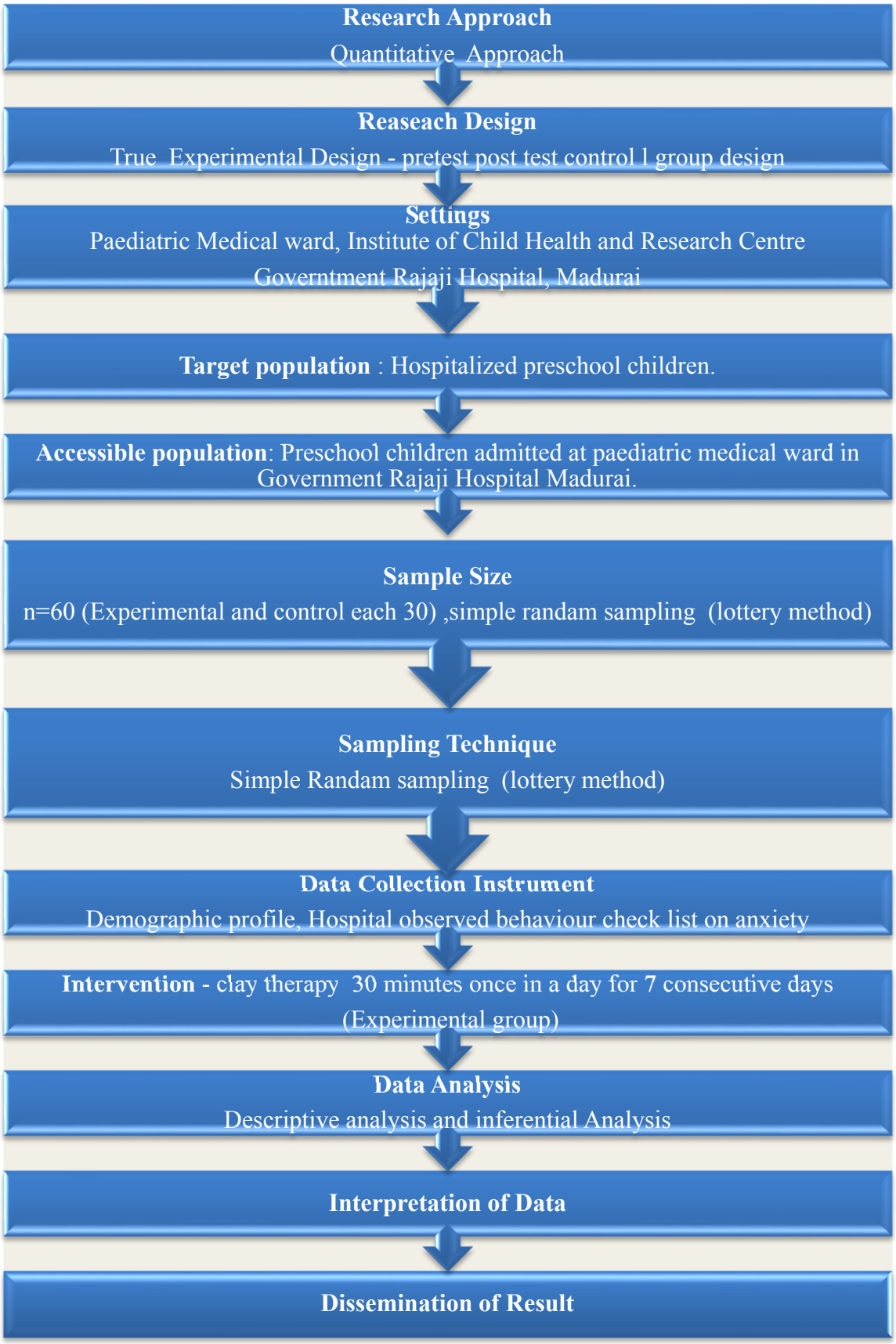
**Inferential statistics include**

1. Paired 't' test for comparison of pre assessment and post assessment of experimental group
2. Unpaired 't' test for comparison of post test between control and experimental group to assess the effectiveness of clay of therapy
3. Chi square test is to associate the demographic variables with post test of both groups
4. The data analysis and interpretations of the results are given in the following chapter.

## 3.16 PROTECTION OF HUMAN RIGHTS

The investigator obtained approval from Ethical committee of College of Nursing, The Ethical IRB committee of Government Rajaji hospital and from The Director, Department of Paediatrics, Institute of Child Health and Research Centre Madurai. Both verbal and written consent was obtained from all the participants. Confidentiality and Anonymity was maintained throughout the study

**Schematic Representation of the methodology**



# *Data Analysis And Interpretation*

# CHAPTER IV

# DATA ANALYSIS AND INTERPRETATION

***"The results you achieve will be in direct proportion to the effort you apply"***

***- Dennis waitle***

The data analysis and interpretation section deals with what was found by conducting the study. To be useful ,the evidence from data analysis need to be carefully examined ,organized and given meaning ,and both statistical and clinical significance need to be assessed. The interpretation of research activities involves examining evidence, forming conclusions, exploring the significance of findings, generalizing the findings, considering implications, and suggesting further studies.

In this chapter the data collected were edited, tabulated, analyzed and interpreted.

**Section : A -** Distribution of socio-demographic variables.

**Section : B -** Effectiveness of clay therapy on anxiety among hospitalized preschool children.

**Section: C -** Description of the post test level of anxiety among hospitalized preschool children.

**Section: D -** Association between the level of anxiety among hospitalized preschool children and their selected demographic variables

## SECTION I

## DISTRIBUTION DEMOGRAPHIC PROFILES OF THE HOSPITALIZED PRESCHOOL CHILDREN

### TABLE 1 : DISTRIBUTION OF FREQUENCY AND PERCENTAGE WISE DISTRIBUTION OF DEMOGRAPHIC DATA OF HOSPITALIZED PRESCHOOL CHILDREN

**n=60**

| Demographic data | Control group | | Experimental group | |
|---|---|---|---|---|
| | f | % | f | % |
| **1.Age of the child (in years):** | | | | |
| a) 3-4 years | 10 | 33.3 | 10 | 33.3 |
| b) 4-5 years | 13 | 43.3 | 9 | 30 |
| c) 5-6 years | 7 | 23.3 | 11 | 36.7 |
| d) >6 years | 0 | 0 | 0 | 0 |
| **2.Gender of the child :** | | | | |
| a) Male | 14 | 46.7 | 15 | 50 |
| b) Female | 16 | 53.3 | 15 | 50 |
| **3.Birth order:** | | | | |
| a) First | 11 | 36.7 | 11 | 36.7 |
| b) Second | 13 | 43.3 | 14 | 46.7 |
| c) Third | 5 | 16.7 | 4 | 13.3 |
| d) > third | 1 | 3.3 | 1 | 3.3 |
| **4.Religion :** | | | | |
| a) Hindu | 28 | 93.3 | 27 | 90 |
| b) Muslim | 2 | 6.7 | 3 | 10 |
| c) Christian | 0 | 0 | 0 | 0 |
| d) Others | 0 | 0 | 0 | 0 |
| **5.Family type :** | | | | |
| a) Nuclear | 18 | 60 | 18 | 60 |
| b) Joint | 12 | 40 | 11 | 36.7 |
| c) Extended | 0 | 0 | 0 | 0 |
| d) Separated | 0 | 0 | 1 | 3.3 |

| Demographic data | Control group | | Experimental group | |
|---|---|---|---|---|
| | f | % | f | % |
| **6.Residence :** | | | | |
| a) Rural | 16 | 53.3 | 10 | 33.3 |
| b) Remote village | 3 | 10 | 7 | 23.3 |
| c) Urban | 11 | 36.7 | 12 | 40 |
| d) Semi urban | 0 | 0 | 1 | 3.3 |
| **7.Income :** | | | | |
| a) <Rs.2000 | 8 | 26.7 | 0 | 0 |
| b) Rs.2000-4000 | 17 | 56.7 | 14 | 46.7 |
| c) Rs.4000-6000 | 4 | 13.3 | 13 | 43.3 |
| d) >Rs.6000 | 1 | 3.3 | 3 | 10 |
| **8.Educational status of father :** | | | | |
| a) Non-literate | 6 | 20 | 6 | 20 |
| b) Primary | 13 | 43.3 | 8 | 26.7 |
| c) Secondary | 8 | 26.7 | 11 | 36.7 |
| d) Higher secondary and above | 3 | 10 | 5 | 16.7 |
| **9.Educational status of mother:** | | | | |
| a) Non-literate | 7 | 23.3 | 4 | 13.3 |
| b) Primary | 7 | 23.3 | 10 | 33.3 |
| c) Secondary | 14 | 46.7 | 15 | 50 |
| d) Higher secondary and above | 2 | 6.7 | 1 | 3.3 |
| **10.Education of child:** | | | | |
| a) No formal education | 5 | 16.7 | 1 | 3.3 |
| b) L.K.G | 4 | 13.3 | 10 | 33.3 |
| c) U.K.G | 11 | 36.7 | 5 | 16.7 |
| d) $1^{ST}$ STD | 10 | 33.3 | 14 | 46.7 |
| **11.Dietary pattern:** | | | | |
| a) Vegetarian | 2 | 6.7 | 3 | 10 |
| b) Non –vegetarian | 28 | 93.3 | 27 | 90 |

Table 1 reveals that the demographic information of children those who were participated in the study.

In considering the age in control group, 33.3% of children were belongs to 3-4 years of age, 43.3% were in 4-5 years, and remaining 23.3% were in 5-6 years of age. Most of the children were from the age group of 4-5 years.

Age wise distribution in experimental group, 33.3% of children were in 3-4 years of age, 30% were in 4-5 years, 36.7% were in 5-6 years of age. Most of the children were from the age group of 5-6 years.

While considering gender wise distribution in control group, majority 53.3% of children were female and 46.7% of male children. In experimental group, 50% children were female and 50% of children were male. Both gender are equal in experimental group.

Based on birth order wise distribution in control group, 36.7% of children were in first child, 43.3% of children were in second child,16.7% of children were in third child and 3.3% of children were in four and above child. Majority of children were second birth order. In experimental group, 36.7% were in first child, 46.7% were in second child, 13.3% were in third child and 3.3% were in four and above child. Most of the child were second birth order.

Regarding religion wise distribution in control group, 93.3% of children from Hindu, 6.7% of children from Muslim. Majority of children were from Hindu religion. In experimental group 90% of children from Hindu, 10% of children from Muslim. Majority of children were from Hindu.

With view of the type of family wise distribution in control group, 60% of children were from nuclear family and 40% of children were from joint family. In experimental group 60% of children from nuclear family, 36.7% of children were

joint family, and 3.3% of children were from separated family. Majority of children (60%) were from nuclear family in experimental and control group.

Regarding residence wise distribution in control group, 53.3% of children were from rural area,10% of children were from remote village, 36.7% of children were from urban area and 0% of children were from semi urban area. Most of the children were from rural area. In experimental group, 33.3% of children were from rural area, 23.3% of children were from remote village, 40 % of children were from urban area and 3.3% of children were from semi urban area. Majority of children were from urban area.

With regarding income in control group, 26.7% of children were from less than 2000, 56.7% of children were from 2000-4000, 13.3% of children were from 4000-6000, and 3.3% of children were from > 6000. Most of the children were from the income of 2000-4000. In experimental group 46.7% of children were from 2000-4000, 43.3% of children were from 4000-6000, and 10% of children were from > 6000. Most of the children were from 2000-4000 of income.

Considering father's education wise distribution in control group, 20% of fathers were having no formal education, 43.3% of fathers were having primary education, 26.7% of fathers were having secondary education and 10% of fathers were having higher and above education. In experimental group 20% of fathers were having no formal education, 26.7% of father were having primary education, 36.7% of fathers were having secondary education, 16.7% of fathers were having higher and above education.

On the view of mother's education wise distribution in control group, 23.3% of mothers were having no formal education, 23.3% of mothers were having primary education, 46.7% of mothers were having secondary education and 6.7% of mothers

were having higher and above education. Most of the mothers were in secondary education. In experimental group, 13.3% of mothers were having no formal education, 33.3% of the mothers were having primary education, 50 % of the mothers were having secondary education, 3.3% 0f children were having higher and above education. Most of the mothers were having secondary education.

Regard the standard of studying wise distribution in control group, 16.7% were not going school, 13.3% were studying l.k.g, 36.7% were studying u.k.g and 33.3% were studying 1st std. majority of the children were studying u.k.g. In experimental group 3.3% were not going school, 33.3% were studying l.k.g, 16.7% were studying u.k.g and 46.7% were studying 1st std. majority of the children were studying 1st std.

Considering dietary pattern, in control group 6.7% of children were from vegetarian, and 93.3% of children were from non- vegetarian. In experimental group 10% of children were from vegetarian, 90% of children were from non-vegetarian. In both control and experimental group the most of the children were from non-vegetarian.

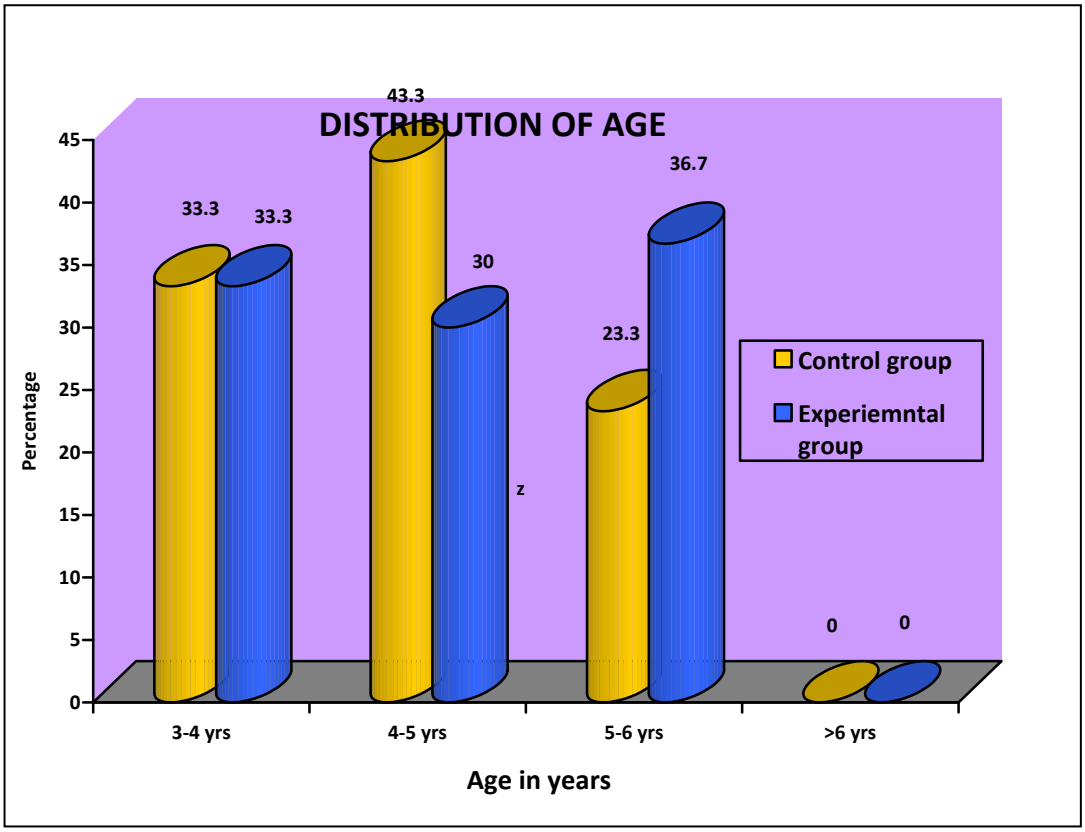



**Figure.3: Multiple cylinder diagram showing distribution of hospitalized preschool children according to their age.**

Above figure manifest the age in control group, 33.3%(10) of children were belongs to 3-4 years of age, 43.3%(13) were in 4-5 years, and remaining 23.3%(7) were in 5-6 years of age. In experimental group, 33.3% (10) of children were in 3-4 years of age, 30% (9) were in 4-5 years, 36.7% (11) were in 5-6 years of age.

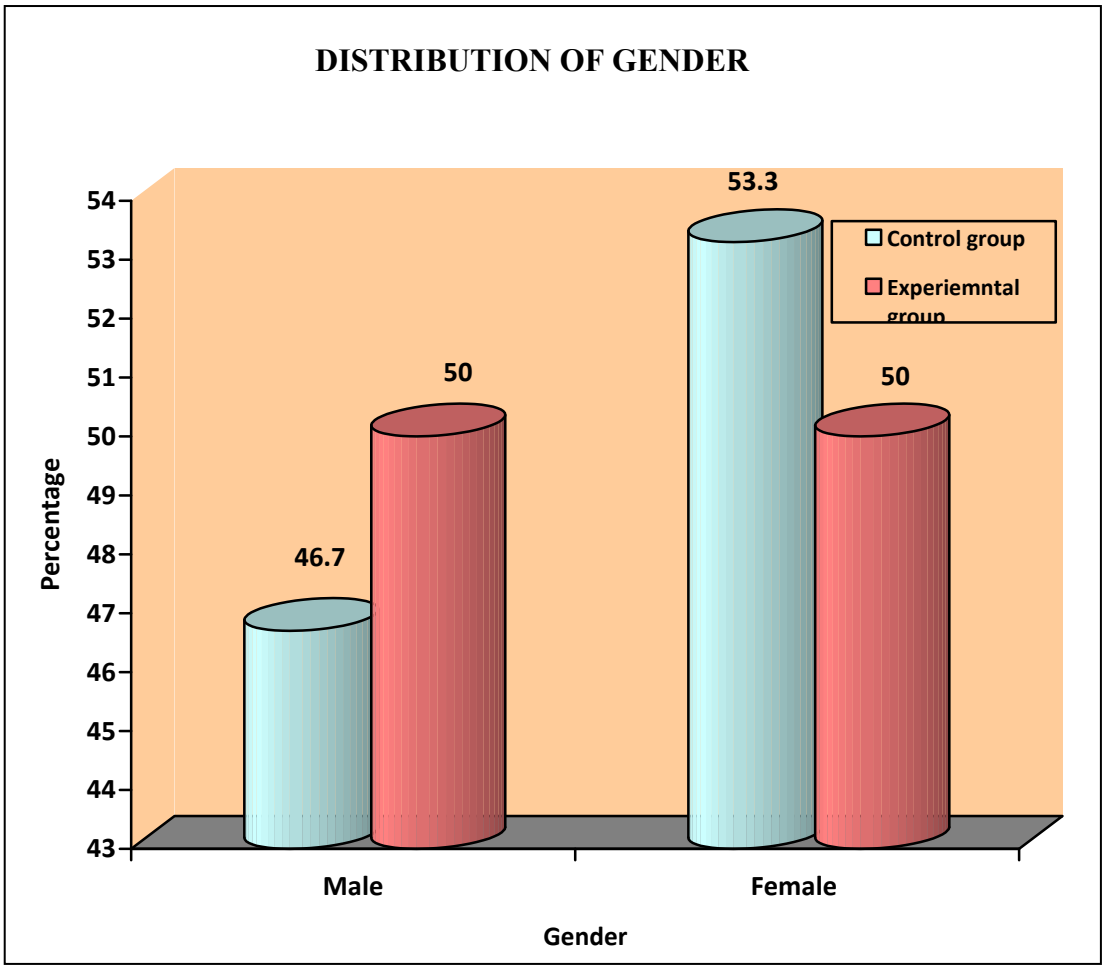



**Fig.4 : Multiple cylinder diagram shows the distribution of hospitalized preschool children according to their the gender.**

Above diagram portrays that the gender wise distribution in control group, majority 53.3%(16) of children were female and 46.7%(14) of male children. In experimental group, 50%(15) children were female and 50%(15) of children were male.

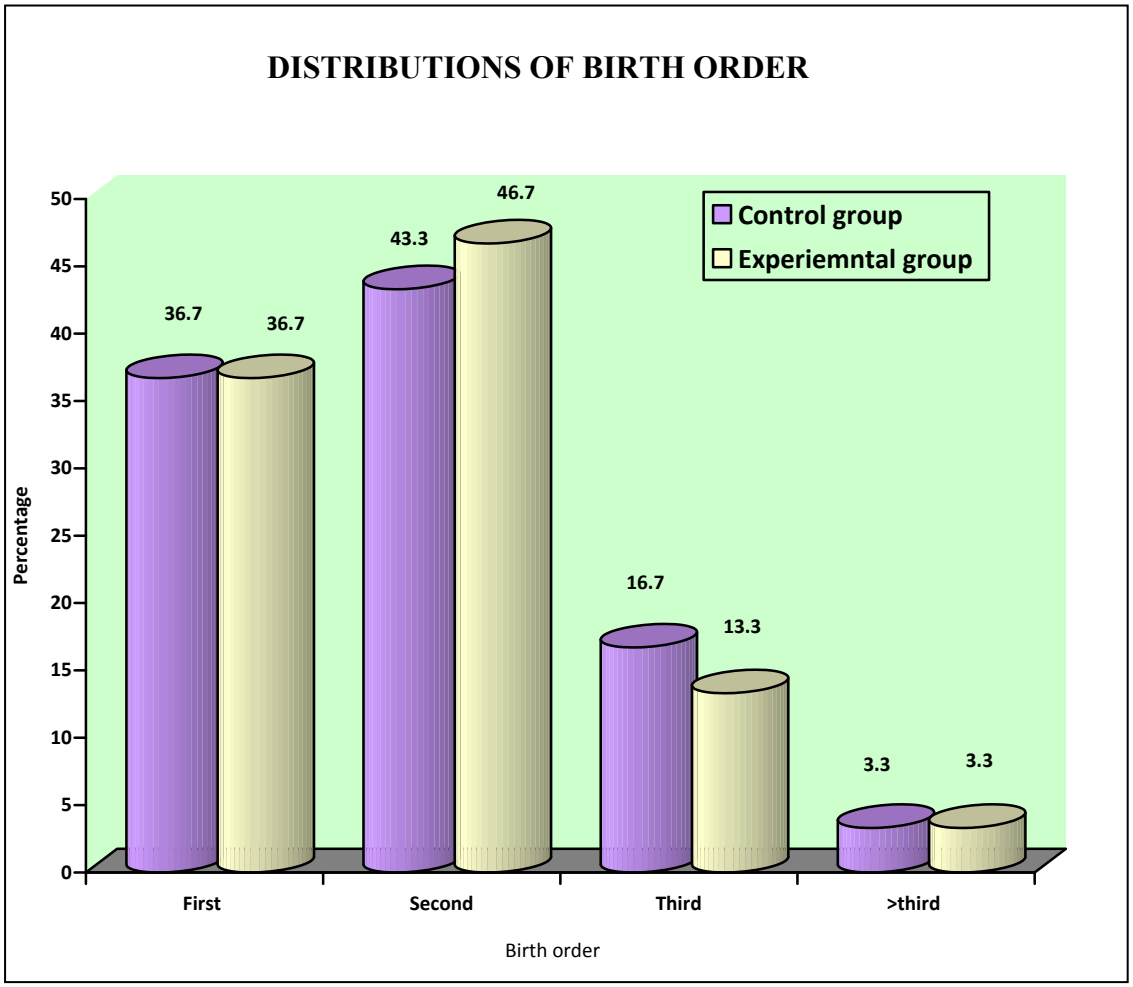



**Fig.5 : Multiple cylinder diagram identifies the distribution of hospitalized children according to their birth order.**

Above diagram identifies the birth order wise distribution in control group, 36.7%(11) of children were in first child, 43.3%(13) of children were in second child, 16.7%(5) of children were in third child and 3.3%(1) of children were in four and above child. In experimental group, 36.7%(11) were in first child, 46.7%(14) were in second child, 13.3%(4) were in third child and 3.3%(1) were in four and above child.

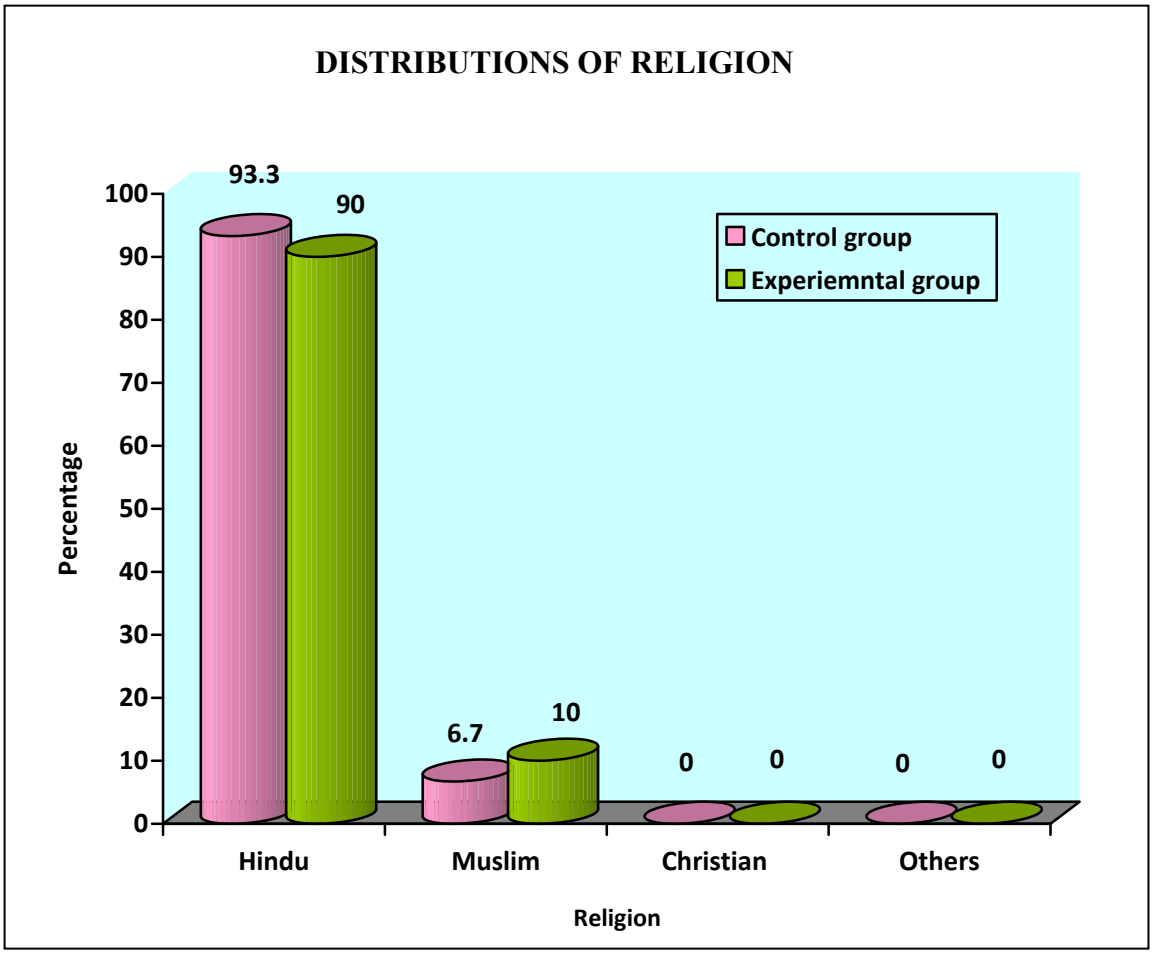



**Fig.6 : Multiple cylinder diagram states the distribution of hospitalized preschool children according to their religion.**

Above diagram states that the Religion wise distribution in control group, 93.3%(28) of children from Hindu, 6.7%(2) of children from Muslim. Majority of children were from Hindu religion. In experimental group 90%(27) of children from Hindu, 10%(3) of children from Muslim.

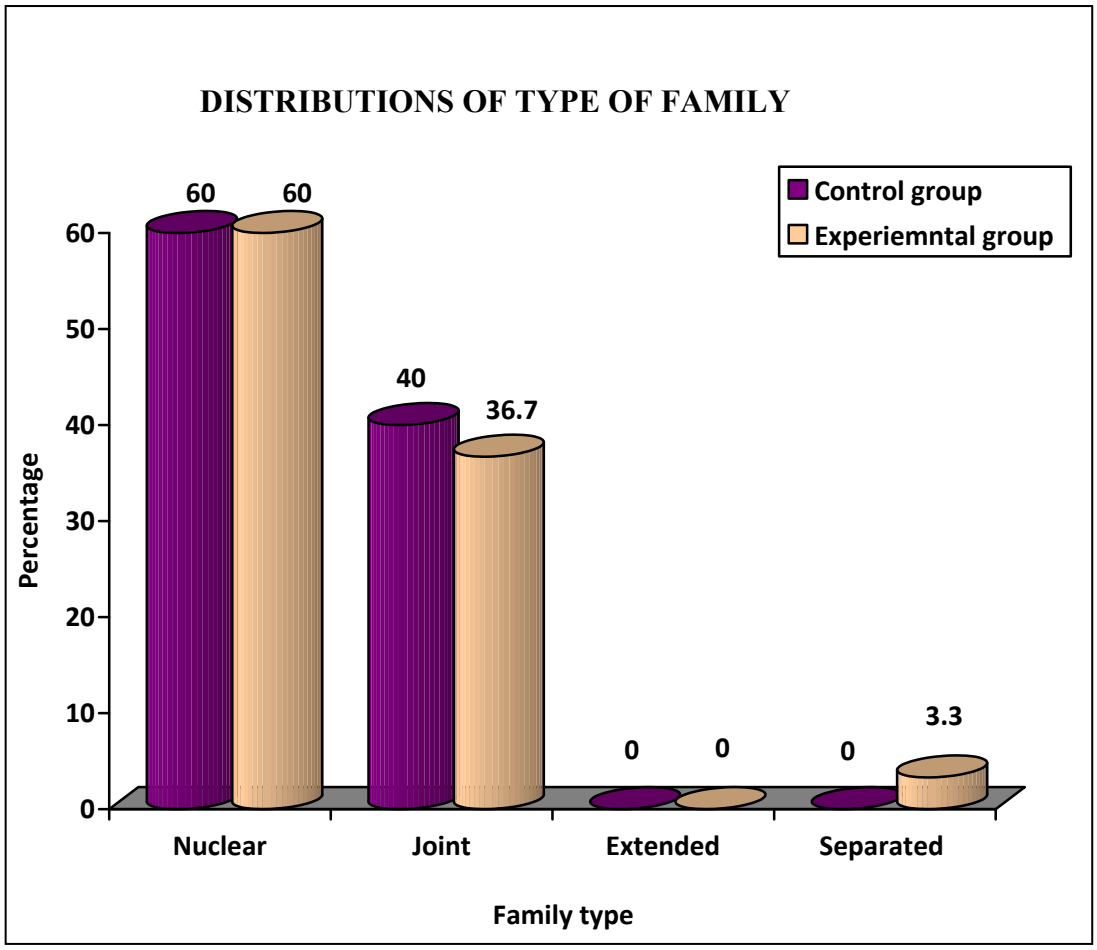



**Fig.7: Multiple cylinder diagram manifest the distribution of hospitalized preschool children according to their family type.**

Above diagram manifest the type of family wise distribution in control group, 60%(18) of children were from nuclear family and 40%(12) of children were from joint family. In experimental group 60%(18) of children from nuclear family, 36.7%(11) of children were joint family, and 3.3%(1) of children were from separated family.

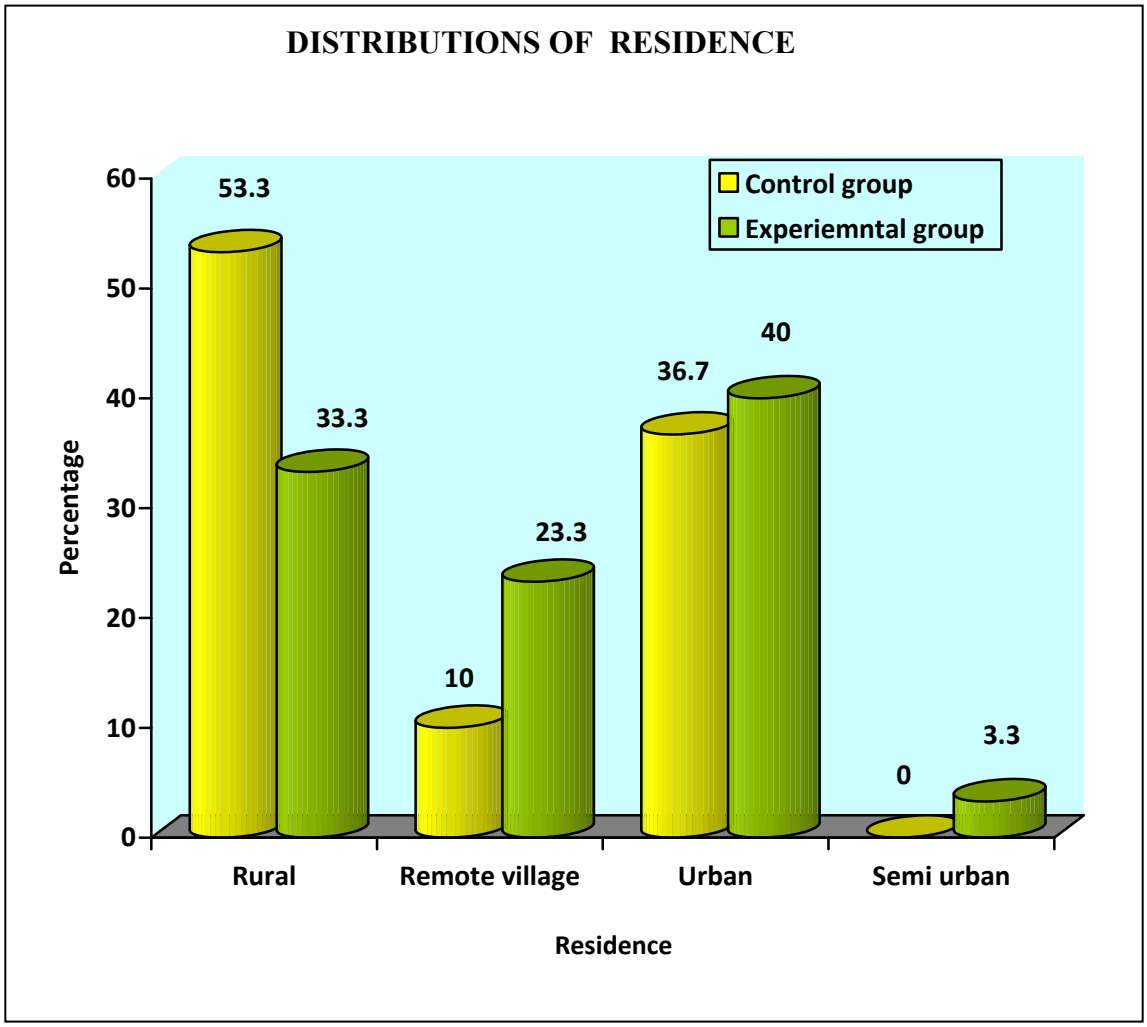



**Fig.8 : Multiple cylinder diagram depicts the distribution of hospitalized preschool children according to their residence.**

Above diagram depicts that the residence wise distribution in control group, 53.3%(16) of children were from rural area, 10%(3) of children were from remote village, 36.7%(11) of children were from urban area and 0%(0) of children were from semi urban area. In experimental group, 33.3%(10) of children were from rural area, 23.3%(7) of children were from remote village, 40%(12) of children were from urban area and 3.3%(1) of children were from semi urban area.

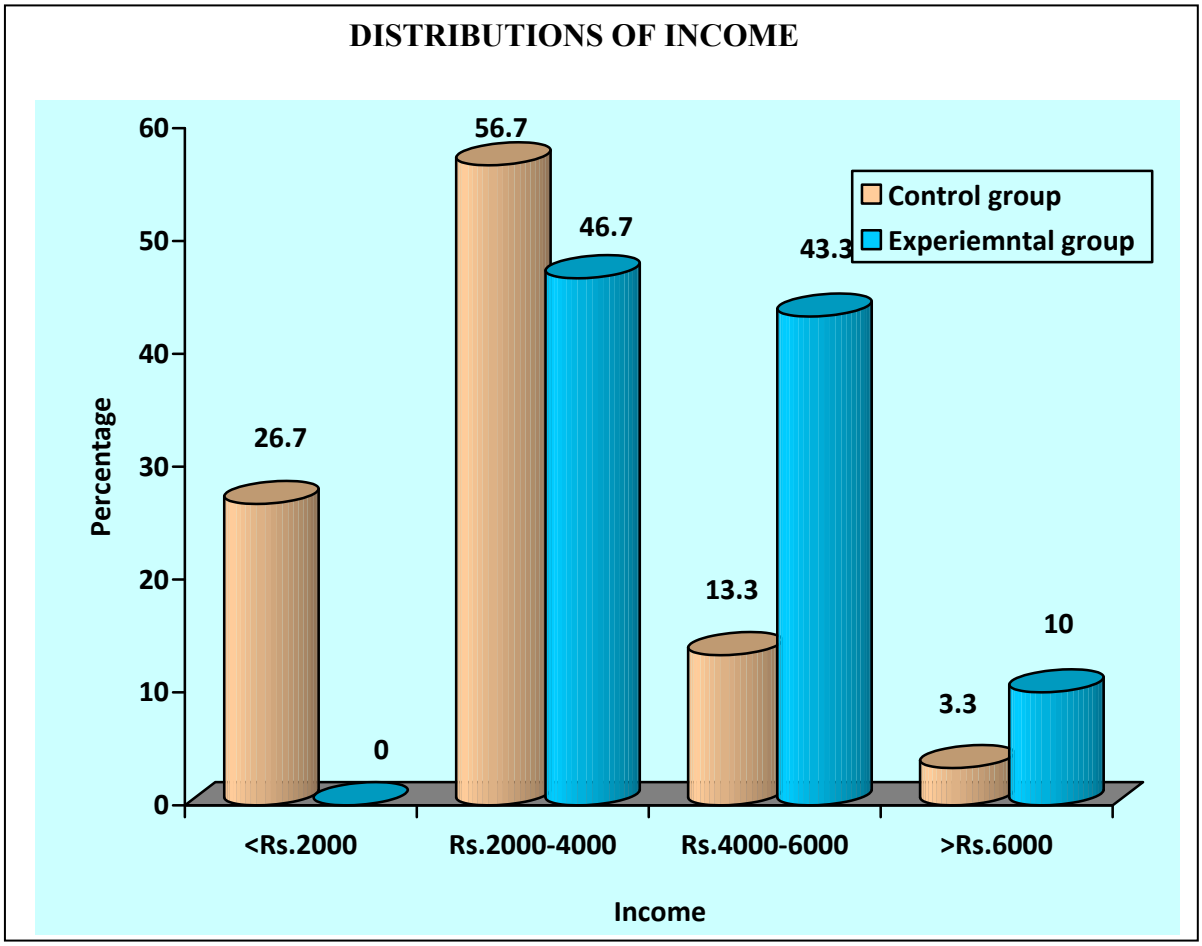



**Fig.9 : Multiple cylinder diagram explains the distribution of hospitalized preschool children according to their income.**

Above diagram explains the income in control group, 26.7%(8) of children were from less than 2000, 56.7%(17) of children were from 2000-4000, 13.3%(4) of children were from 4000-6000, and 3.3%(1) of children were from > 6000. In experimental group 46.7%(14) of children were from 2000-4000, 43.3%(13) of children were from 4000-6000, and 10%(3) of children were from > 6000.

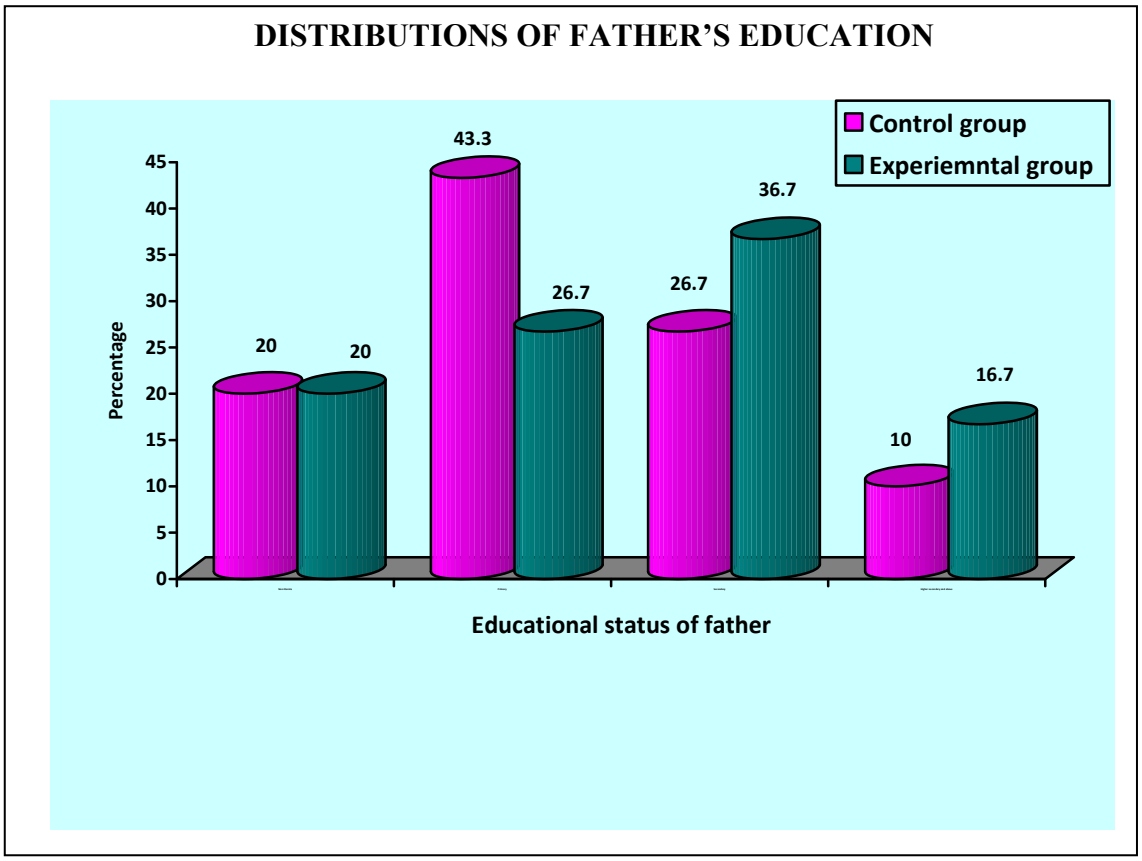



**Fig.10 : Multiple cylinder diagram narrates the distribution of hospitalized preschool children according to their educational status of father.**

Above diagram narrates the father's education wise distribution in control group, 20%(6) of fathers were having no formal education , 43.3%(13) of fathers were having primary education, 26.7%(8) of fathers were having secondary education and 10%(3) of fathers were having higher and above education. In experimental group 20%(6) of fathers were having no formal education, 26.7%(8) of father were having primary education, 36.7%(11) of fathers were having secondary education, 16.7%(5) of fathers were having higher and above education.

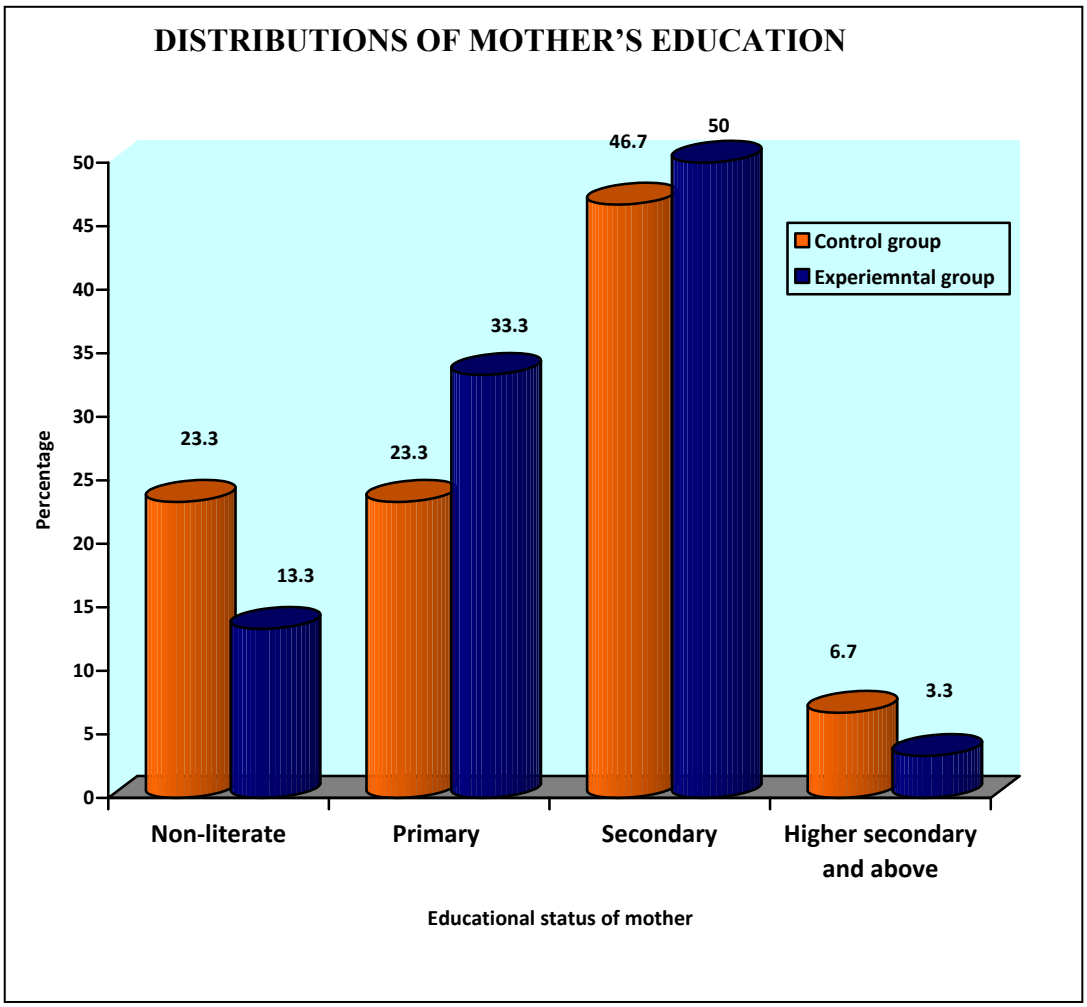



**Fig.11 : Multiple cylinder diagram depicts the distribution hospitalized preschool children according to their educational status of mother.**

Above diagram depicts the mother's education wise distribution in control group, 23.3%(7) of mothers were having no formal education, 23.3%(7) of mothers were having primary education, 46.7%(14) of mothers were having secondary education and 6.7%(2) of mothers were having higher and above education. In experimental group, 13.3%(4) of mothers were having no formal education, 33.3%(10) of the mothers were having primary education, 50 %(15) of the mothers were having secondary education, 3.3%(1) 0f children were having higher and above education.

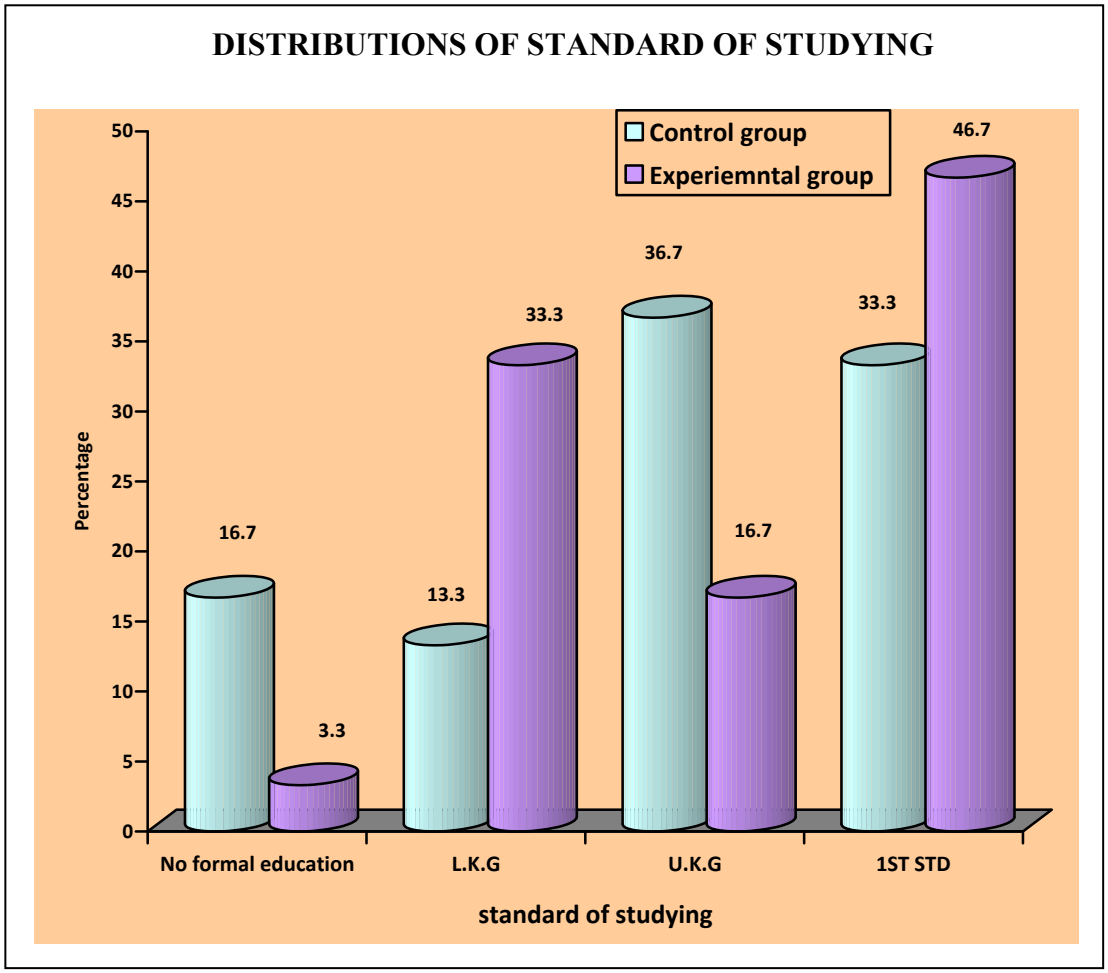



**Fig.12 : Multiple cylinder diagram portrays the distribution of hospitalized preschool children according to their education.**

Above diagram identifies the standard of studying wise distribution in control group, 16.7%(5) were not going school, 13.3%(4) were studying l.k.g, 36.7%(11) were studying u.k.g and 33.3%(10) were studying 1st std. In experimental group 3.3%(1) were not going school, 33.3%(10) were studying l.k.g, 16.7%(5) were studying u.k.g and 46.7%(14) were studying 1st std.

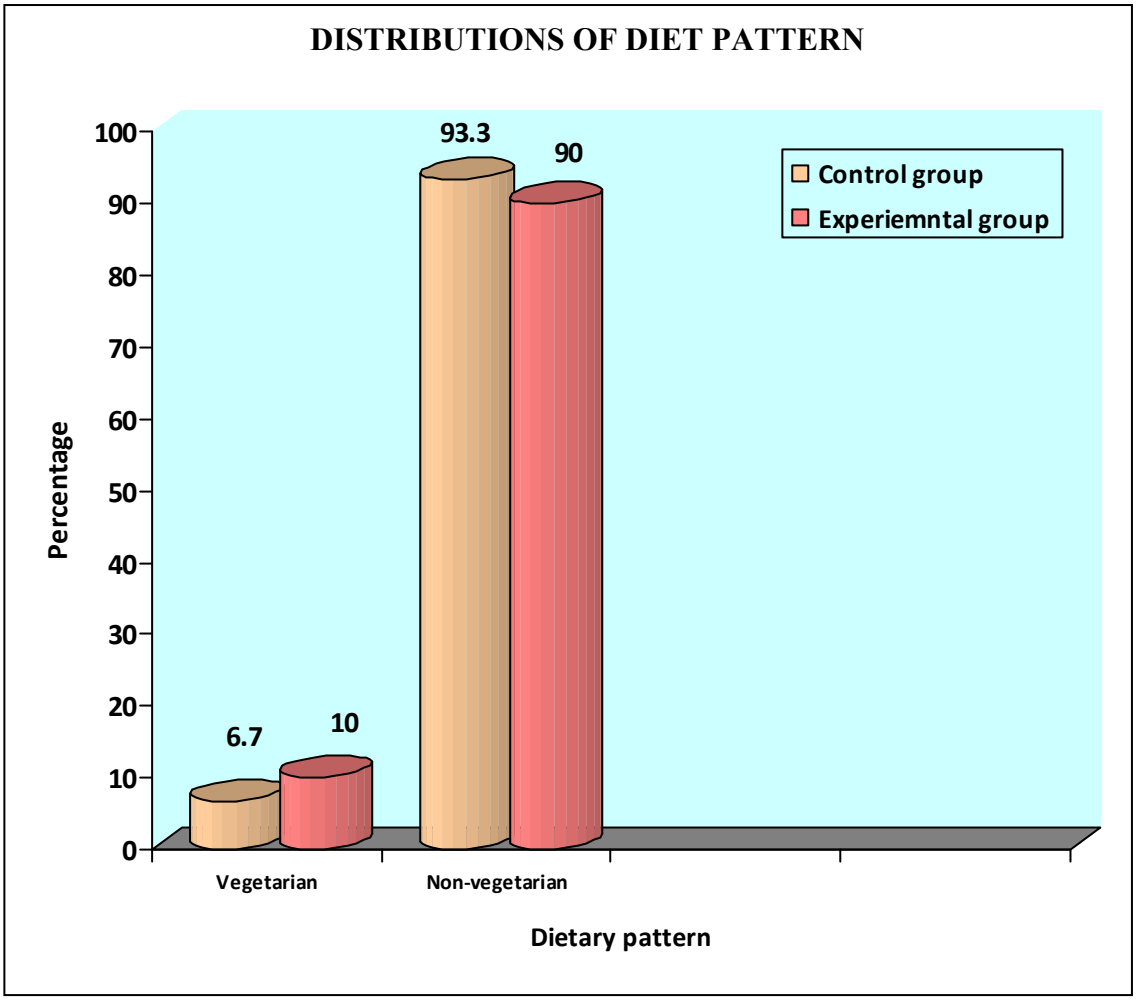



**Fig.13 : Multiple cylinder diagram manifest distribution of hospitalized preschool children according to their dietary pattern.**

Above diagram manifest dietary pattern, in control group 6.7%(2) of children were from vegetarian, and 93.3%(28) of children were from non-vegetarian. In experimental group 10%(3) of children were from vegetarian, 90%(27) of children were from non-vegetarian

**SECTION: B**

**EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDRENL**

**Table 2 : DISTRIBUTION OF MEAN, SD AND MEAN PERCENTAGE OF CONTROL PRE AND POST TEST LEVEL ASSESS ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN**

| Variables | Max score | Control Group -Pre test | | | Control Group -post test | | | Mean Difference % |
|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Mean% | Mean | SD | Mean% | |
| Level of Anxiety | 250 | 139 | 40.45 | 56 | 138.73 | 40.49 | 55 | 1 |

Table 4.2.1 represents the mean and SD value of pre-test anxiety level in control group mean =139, SD=40.5 and post test level in control group mean =138.73, SD=40.49 and the difference in mean is 1%.

**Table 3.**

**DISTRIBUTION OF MEAN, SD AND MEAN PERCENTAGE OF EXPERIMENTAL PRE AND POST TEST LEVEL ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN .**

| Variables | Max Score | Experimental Group pre test | | | Experimental Group post test | | | Mean Difference % |
|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Mean% | Mean | SD | Mean % | |
| Level of anxiety | 250 | 148.47 | 34.44 | 59 | 93.9 | 34.58 | 38 | 21 |

The above table shows mean, standard deviation and mean percentage of clay therapy on anxiety among hospitalized preschool children in paediatric medical ward in experimental group. The post test score anxiety means (93.9) is lesser than the pretest score anxiety (148.47) mean. The difference in mean percentage on anxiety is 21.

**Table .4.**

**DISTRIBUTION OF MEAN, SD AND MEAN PERCENTAGE OF EXPERIMENTAL POST AND CONTROL POST SCORES OF ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN**

| variables | Max score | Control Group post test | | | Experimental Group post test | | | Difference in mean % |
|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Mean % | Mean | SD | Mean% | |
| Level of anxiety | 250 | 138.73 | 40.49 | 55 | 93.9 | 34.58 | 38 | 17 |

The above table shows the comparison of post -test anxiety score between experimental and control group. The experimental group post test anxiety mean 93.9 and S.D 34.58 is lesser than the control group post test anxiety mean 138.73 and S.D 40.49.

**Table. No .5.**

**Frequency and percentage of anxiety among hospitalized preschool children in control group and experimental group.**

| Level of anxiety | Control group | | | | Experimental Group | | | |
|---|---|---|---|---|---|---|---|---|
| | Pre test | | Post test | | Pre test | | Post test | |
| | f | % | F | % | f | % | f | % |
| Normal | - | - | - | - | - | - | 4 | 13.3 |
| Mild | 9 | 30 | 9 | 30 | 4 | 13.3 | 13 | 43.3 |
| Moderate | 8 | 26.7 | 8 | 26.7 | 12 | 40 | 13 | 43.3 |
| Severe | 13 | 43.3 | 13 | 43.3 | 14 | 46.7 | - | - |
| Extreme | - | - | - | - | - | - | - | - |
| Total | 30 | 100 | 30 | 100 | 30 | 100 | 30 | 100 |

The above table shows the frequency and percentage distribution level of anxiety among among hospitalized preschool children in paediatric medical ward . In the control group during pretest, 30% had mild level of anxiety,26.7% had moderate level of anxiety and 43.3% had severe level of anxiety. In the post test, 30%had mild level of anxiety,26.7% had moderate level of anxiety and 43.3% had severe level of anxiety. In experimental group before intervention 13.3% had mild level of anxiety,40% had moderate level of anxiety and the remaining 46.7% had severe level of anxiety. In the post test, 13.3% had no anxiety , 43.3% had mild level of anxiety and the remaining 43.3% had moderate level of anxiety.

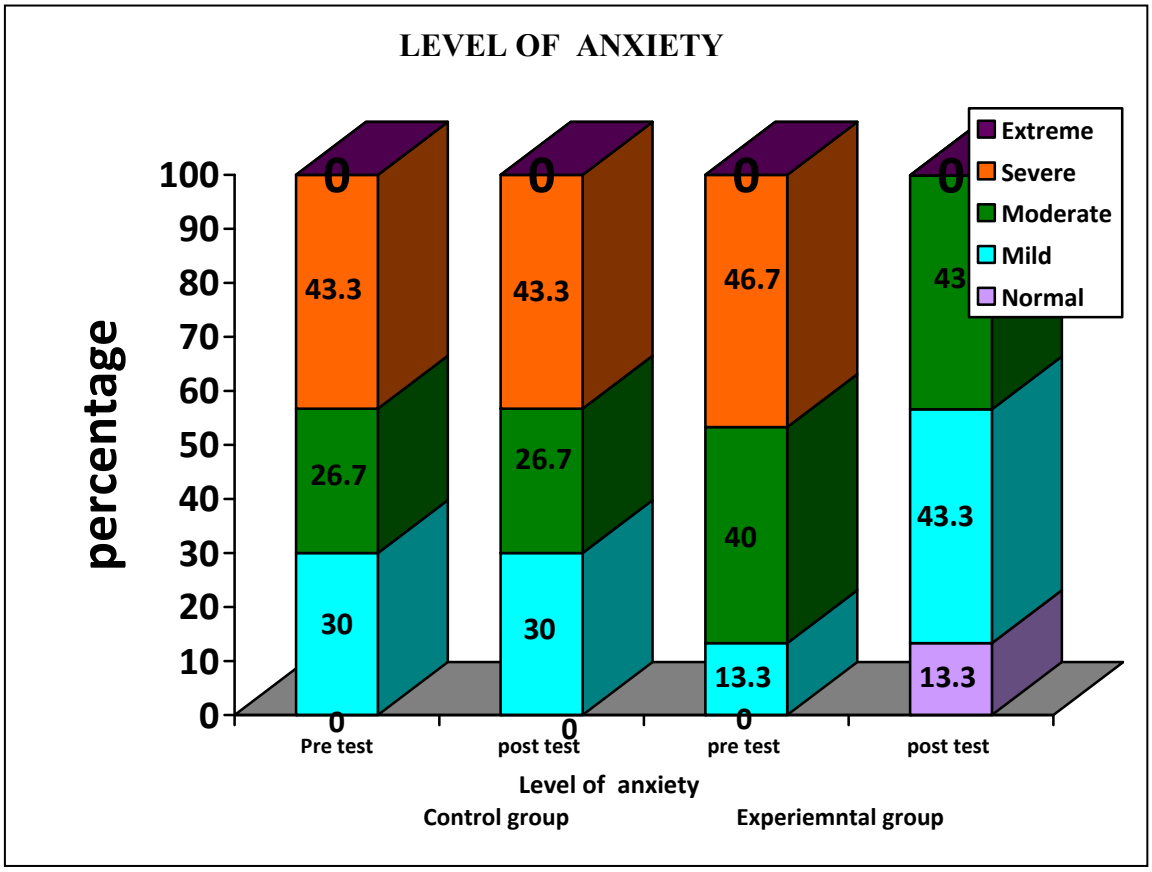



**Fig:13.Multible bar diagram explains the level of anxiety among hospitalized preschool children**

Above diagram reveals the level of anxiety score in the control group during pretest 30% had mild level of anxiety,26.7% had moderate level of anxiety and 43.3% had severe level of anxiety. In experimental group before intervention13.3% had mild level of anxiety,40%had moderate level of anxiety and the remaining 46.7% had severe level of anxiety . In both experimental as well as in the control group children shows symptoms of anxiety before exposed to clay therapy.

In control group post test, 30% had mild level of anxiety, 26.7% had moderate level of anxiety and 43.3% had severe level of anxiety. In experimental group the post test, 13.3% had no anxiety , 43.3% had mild level of anxiety and the remaining 43.3% had moderate level of anxiety .The children who are treated with clay therapy shows a remarkable change (reduced anxiety).

**Table. 6.**

**PAIRED T-TEST FOR CONTROL PRE AND CONTROL POST TEST TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN**

| variables | Control group Pre test | | Control group post test | | Mean difference | 't'-value | P-value |
|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | | | |
| Level of anxiety | 139 | 40.45 | 138.73 | 40.49 | 0.27 | **1.55** | **0.133** |

The above table shows the anxiety among hospitalized preschool children by using paired "t"-test. The obtained t-value between control pre and control post test is 1.55 at p-value 0.133 level of significance.

**Table .7.**

**PAIRED T-TEST FOR EXPERIMENTAL PRE AND EXPERIMENTAL POST TEST TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN**

| Variables | Experimental group pre test | | Experimental group post test | | Mean Difference | 't'-value | P-value |
|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | | | |
| Level of anxiety | 148.47 | 34.44 | 93.9 | 34.58 | 54.57 | 20.84 | **0.000*** ** |

**( *** P<0.001 highly significant)**

The above table shows the effectiveness of clay therapy on anxiety among hospitalized preschool children by using paired "t"-test. The obtained t-value between experimental pre and experimental post test is 20.84 at p-value 0.000 level of significance.

## SECTION :C

## DESCRIPTION OF THE POST TEST LEVEL OF ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN

**Table .8.**

**UNPAIRED T-TEST FOR CONTROL POST AND EXPERIMENTAL POST TEST TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN**

| Variables | Control group post test | | Experimental group Post test | | Mean Difference | 't'-value | P-value |
|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | | | |
| Level of anxiety | 138.73 | 40.49 | 93.9 | 34.58 | 44.83 | 4.61 | **0.000*** ** |

**( *** P<0.001 highly significant)**

The above table shows the effectiveness of clay therapy on anxiety among by using un-paired "t"-test. The obtained t-value between experimental and control group anxiety is 4.61 at p-value 0.000 level of significance.

**SECTION : D**

**ASSOCIATION BETWEEN THE LEVEL OF ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN AND THEIR SELECTED DEMOGRAPHIC VARIABLES**

**Table. 9.**

**POST TEST LEVEL OF ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN (CONTROL GROUP) AND THEIR SELECTED SOCIO DEMOGRAPHIC DATA.**

**n =60**

| Demographic variables | Mild | | Moderate | | Severe | | $\chi^2$-value | p-value |
|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | | |
| **1.Age of the child (in years):** | | | | | | | | |
| a) 3-4 years | 2 | 6.7 | 2 | 6.7 | 6 | 20 | | |
| b) 4-5 years | 2 | 6.7 | 5 | 16.7 | 6 | 20 | 8.53 | 0.074 |
| c) 5-6 years | 5 | 16.7 | 1 | 3.3 | 1 | 3.3 | (df=4) | |
| d) >6 years | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **2.Gender of the child :** | | | | | | | | |
| a) Male | 4 | 13.3 | 3 | 10 | 7 | 23.3 | 0.56 | 0.757 |
| b) Female | 5 | 16.7 | 5 | 16.7 | 6 | 20 | (df=2) | |
| **3.Birth order:** | | | | | | | | |
| a) First | 2 | 6.7 | 2 | 6.7 | 7 | 23.3 | | |
| b) Second | 6 | 20 | 3 | 10 | 4 | 13.3 | 7.708 | 0.260 |
| c) Third | 1 | 3.3 | 3 | 10 | 1 | 3.3 | (df=6) | |
| d) > third | 0 | 0 | 0 | 0 | 1 | 3.3 | | |
| **4.Religion :** | | | | | | | | |
| a) Hindu | 8 | 26.7 | 7 | 23.3 | 13 | 43.3 | | |
| b) Muslim | 1 | 3.3 | 1 | 3.3 | 0 | 0 | 1.65 | 0.438 |
| c) Christian | 0 | 0 | 0 | 0 | 0 | 0 | (df=2) | |
| d) Others | 0 | 0 | 0 | 0 | 0 | 0 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **5.Family type :** | | | | | | | | |
| a) Nuclear | 5 | 16.7 | 4 | 13.3 | 9 | 30 | | |
| b) Joint | 4 | 13.3 | 4 | 13.3 | 4 | 13.3 | 0.87 | 0.648 |
| c) Extended | 0 | 0 | 0 | 0 | 0 | 0 | (df=2) | |
| d) Separated | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **6.Residence :** | | | | | | | | |
| a) Rural | 3 | 10 | 5 | 16.7 | 8 | 26.7 | | |
| b) Remote village | 1 | 3.3 | 0 | 0 | 2 | 6.7 | 3.68 | 0.450 |
| c) Urban | 5 | 16.7 | 3 | 10 | 3 | 10 | (df=4) | |
| d) Semi urban | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **7.Income :** | | | | | | | | |
| a) <Rs.2000 | 2 | 6.7 | 1 | 3.3 | 5 | 16.7 | | |
| b) Rs.2000-4000 | 4 | 13.3 | 6 | 20 | 7 | 23.7 | 8.90 | 0.179 |
| c) Rs.4000-6000 | 3 | 10 | 0 | 0 | 1 | 3.3 | (df=6) | |
| d) >Rs.6000 | 0 | 0 | 1 | 3.3 | 0 | 0 | | |
| **8.Educational status of father :** | | | | | | | | |
| a) Non-literate | 3 | 10 | 0 | 0 | 3 | 10 | | |
| b) Primary | 4 | 13.3 | 4 | 13.3 | 5 | 16.7 | 4.42 | 0.619 |
| c) Secondary | 2 | 6.7 | 3 | 10 | 3 | 10 | (df=6) | |
| d) Higher secondary and above | 0 | 0 | 1 | 3.3 | 2 | 6.7 | | |
| **9.Educational status of mother:** | | | | | | | | |
| a) Non-literate | 2 | 6.7 | 2 | 6.7 | 3 | 10 | | |
| b) Primary | 2 | 6.7 | 2 | 6.7 | 3 | 10 | | |
| c) Secondary | 5 | 16.7 | 4 | 13.3 | 5 | 16.7 | 3.004 | 0.808 |
| d) Higher secondary and above | 0 | 0 | 0 | 0 | 2 | 6.7 | (df=6) | |
| **10.Education of child:** | | | | | | | | |
| a) No formal education | 2 | 6.7 | 1 | 3.3 | 2 | 6.7 | | |
| b) L.K.G | 0 | 0 | 1 | 3.3 | 3 | 10 | 3.46 | 0.750 |
| c) U.K.G | 3 | 10 | 4 | 13.3 | 4 | 13.3 | (df=6) | |
| d) 1$^{ST}$ STD | 4 | 13.3 | 2 | 6.7 | 4 | 13.3 | | |
| **11.Dietary pattern:** | | | | | | | | |
| a) Vegetarian | 9 | 0 | 1 | 3.3 | 1 | 3.3 | 1.102 | 0.576 |
| b) Non –vegetarian | | 30 | 7 | 23.3 | 12 | 40 | (df=2) | |

(*-P<0.05, significant and **-P<0.01 & ***-P<0.001 , Highly significant )

Above table shows that, In control group no significant association had been found out between the demographic variables of children and the level of anxiety among hospitalized preschool children belong to post test . there is no association between the level of anxiety among hospitalized children and other demographic variables in control group.

**Table No.10**

**POST TEST LEVEL OF ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN (EXPERIMENTAL GROUP) AND SELECTED DEMOGRAPHIC VARIABLES**

**n =60**

| Demographic variables | Normal | | Mild | | Moderate | | $\chi^2$-value | p-value |
|---|---|---|---|---|---|---|---|---|
| | F | % | f | % | F | % | | |
| **1.Age of the child (in years):** | | | | | | | | |
| a) 3-4 years | 2 | 6.7 | 3 | 10 | 5 | 16.7 | | |
| b) 4-5 years | 1 | 3.3 | 3 | 10 | 5 | 16.7 | 3.25 | 0.517 |
| c) 5-6 years | 1 | 3.3 | 7 | 23.3 | 3 | 10 | (df=4) | |
| d) >6 years | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **2.Gender of the child :** | | | | | | | | |
| a) Male | 2 | 6.7 | 7 | 23.3 | 6 | 20 | 0.15 | 0.926 |
| b) Female | 2 | 6.7 | 6 | 20 | 7 | 23.3 | (df=2) | |
| **3.Birth order:** | | | | | | | | |
| a) First | 0 | 0 | 2 | 6.7 | 9 | 30 | | |
| b) Second | 2 | 6.7 | 8 | 26.7 | 4 | 13.3 | 15.27 | 0.018* |
| c) Third | 2 | 6.7 | 2 | 6.7 | 0 | 0 | (df=6) | |
| d) > third | 0 | 0 | 1 | 3.3 | 0 | 0 | | |
| **4.Religion :** | | | | | | | | |
| a) Hindu | 3 | 10 | 12 | 40 | 12 | 40 | | |
| b) Muslim | 1 | 3.3 | 1 | 3.3 | 1 | 3.3 | 1.15 | 0.562 |
| c) Christian | 0 | 0 | 0 | 0 | 0 | 0 | (df=2) | |
| d) Others | 0 | 0 | 0 | 0 | 0 | 0 | | |
| **5.Family type :** | | | | | | | | |
| a) Nuclear | 2 | 6.7 | 9 | 30 | 7 | 23.3 | | |
| b) Joint | 2 | 6.7 | 4 | 13.3 | 5 | 16.7 | 1.97 | 0.741 |
| c) Extended | 0 | 0 | 0 | 0 | 1 | 3.3 | (df=4) | |
| d) Separated | 0 | 0 | 0 | 0 | 0 | 0 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **6.Residence :** | | | | | | | | |
| a) Rural | 1 | 3.3 | 4 | 13.3 | 5 | 16.7 | | |
| b) Remote village | 2 | 6.7 | 4 | 13.3 | 1 | 3.3 | 4.76 | 0.574 |
| c) Urban | 1 | 3.3 | 5 | 16.7 | 6 | 20 | (df=6) | |
| d) Semi urban | 0 | 0 | 0 | 0 | 1 | 3.3 | | |
| **7.Income :** | | | | | | | | |
| a) <Rs.2000 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| b) Rs.2000-4000 | 2 | 6.7 | 6 | 20 | 6 | 20 | 0.99 | 0.911 |
| c) Rs.4000-6000 | 2 | 6.7 | 5 | 16.7 | 6 | 20 | (df=4) | |
| d) >Rs.6000 | 0 | 0 | 2 | 6.7 | 1 | 3.3 | | |
| **8.Educational status of father :** | | | | | | | | |
| a) Non-literate | 0 | 0 | 5 | 16.7 | 1 | 3.3 | | |
| b) Primary | 1 | 3.3 | 3 | 10 | 4 | 13.3 | 8.36 | 0.213 |
| c) Secondary | 2 | 6.7 | 5 | 16.7 | 4 | 13.3 | (df=6) | |
| d) Higher secondary and above | 1 | 3.3 | 0 | 0 | 4 | 13.3 | | |
| **9.Educational status of mother:** | | | | | | | | |
| a) Non-literate | 0 | 0 | 3 | 10 | 1 | 3.3 | | |
| b) Primary | 1 | 3.3 | 4 | 13.3 | 5 | 16.7 | 3.86 | 0.695 |
| c) Secondary | 3 | 10 | 6 | 20 | 6 | 20 | (df=6) | |
| d) Higher secondary and above | 0 | 0 | 0 | 0 | 1 | 3.3 | | |
| **10.Education of child:** | | | | | | | | |
| a) No formal education | 1 | 3.3 | 0 | 0 | 0 | 0 | | |
| b) L.K.G | 2 | 6.7 | 2 | 6.7 | 6 | 20 | 13.25 | 0.045* |
| c) U.K.G | 0 | 0 | 2 | 6.7 | 3 | 10 | (df=6) | |
| d) $1^{ST}$ STD | 1 | 3.3 | 9 | 30 | 4 | 13.3 | | |
| **11.Dietary pattern:** | | | | | | | | |
| a) Vegetarian | 0 | 0 | 0 | 0 | 3 | 10 | 4.36 | |
| b) Non –vegetarian | 4 | 13.3 | 13 | 43.3 | 10 | 33.3 | (df=2) | 0.113 |

(*-P<0.05, significant and **-P<0.01 & ***-P<0.001 , Highly significant )

Above table shows that, In experimental group significant association had been found out in birth order and standard of studying demographic variables of children. there is no significant association between the level of anxiety among hospitalized children and other demographic variables in experimental group.

# *Discussion*

# CHAPTER V

# DISCUSSION

This chapter deals with the findings of the study based on the interpretation of the statistical analysis. The findings are discussed in relation to the objectives of the study. The findings are supported by the review of literature.

The purpose of the study was to assess the Effectiveness of clay therapy in reducing the anxiety of hospitalized preschool children at paediatric medical ward in institute of child health and research centre, government Rajaji hospital, Madurai.

**Demographic details of the study:**

The demographic information of children those who were participated in the study.

In considering the age in control group, 33.3% of children were belongs to 3-4 years of age, 43.3% were in 4-5 years, and remaining 23.3% were in 5-6 years of age. Age wise distribution in experimental group ,33.3% of children were in 3-4 years of age, 30% were in 4-5 years ,36.7% were in 5-6 years of age.

Regarding gender wise distribution in control group, majority 53.3% of children were female and 46.7% of male children. In experimental group, 50% children were female and 50% of children were male.

Based on birth order wise distribution in control group, 36.7% of children were in first child , 43.3% of children were in second child ,16.7% of children were in third child and 3.3% of children were in four and above child. In experimental group, 36.7% were in first child , 46.7% were in second child , 13.3% were in third child and 3.3% were in four and above child.

Religion wise distribution in control group, 93.3% of children from Hindu, 6.7% of children from Muslim . majority of children were from Hindu religion . In experimental group 90% of children from Hindu , 10% of children from Muslim.

With view of the type of family wise distribution in control group , 60% of children were from nuclear family and 40% of children were from joint family. In experimental group 60% of children from nuclear family, 36.7% of children were joint family, and 3.3% of children were from separated family.

On the basis of residence wise distribution in control group, 53.3% of children were from rural area ,10% of children were from remote village, 36.7% of children were from urban area and 0% of children were from semi urban area. In experimental group, 33.3% of children were from rural area , 23.3% of children were from remote village, 40 % of children were from urban area and 3.3% of children were from semi urban area.

With the view of income in control group, 26.7% of children were from less than 2000, 56.7% of children were from 2000-4000, 13.3% of children were from 4000-6000 and 3.3% of children were from > 6000. In experimental group 46.7% of children were from 2000-4000, 43.3% of children were from 4000-6000,and 10% of children were from > 6000.

Considering father's education wise distribution in control group, 20% of fathers were having no formal education, 43.3% of fathers were having primary education, 26.7% of fathers were having secondary education and 10% of fathers were having higher and above education. In experimental group 20% of fathers were having no formal education, 26.7% of father were having primary education, 36.7% of fathers were having secondary education, 16.7% of fathers were having higher and above education.

Regarding mother's education wise distribution in control group, 23.3% of mothers were having no formal education, 23.3% of mothers were having primary

education , 46.7% of mothers were having secondary education and 6.7% of mothers were having higher and above education. In experimental group, 13.3% of mothers were having no formal education, 33.3% of the mothers were having primary education, 50 % of the mothers were having secondary education, 3.3% 0f children were having higher and above education.

Regard the standard of studying wise distribution in control group, 16.7% were not going school, 13.3% were studying L.K.G , 36.7% were studying U.K.G and 33.3% were studying 1st std. In experimental group 3.3% were not going school, 33.3% were studying L.K.G , 16.7% were studying U.K.G and 46.7% were studying 1st std.

Considering dietary pattern, in control group 6.7% of children were from vegetarian, and 93.3% of children were from non- vegetarian. In experimental group 10% of children were from vegetarian, 90% of children were from non-vegetarian.

**THE FIRST OBJECTIVE OF THE STUDY IS TO ASSESS THE LEVEL OF ANXIETY AMONG HOSPITALISED PRESCHOOL CHILDREN IN EXPERIMENTAL AND CONTROL GROUP.**

On pre assessment the level of anxiety score in the control group during pretest 30% had mild level of anxiety,26.7% had moderate level of anxiety and 43.3% had severe level of anxiety. In experimental group before intervention13.3% had mild level of anxiety,40%had moderate level of anxiety and the remaining 46.7% had severe level of anxiety . In both experimental as well as in the control group children shows symptoms of anxiety before exposed to clay therapy.

In control group post test, 30% had mild level of anxiety, 26.7% had moderate level of anxiety and 43.3% had severe level of anxiety. In experimental group the post test, 13.3% had no anxiety , 43.3% had mild level of anxiety and the remaining 43.3% had moderate level of anxiety . This study revealed that hospitalized

preschool children have some level of anxiety. The children who are treated with clay therapy shows a remarkable change (reduced anxiety).

**The study findings was consistent with the study done by Imelda Coyne (2006)** This article reports on children's experiences of hospitalization. Data were collected via semi-structured interviews with 11 children aged between four to 14 years from four pediatric units in England. The children identified a range of fears and concerns, which included: separation from parents and family; unfamiliar environment; investigations and treatments; and loss of self-determination. The children's loss of self-determination over personal needs exacerbated their fears and concerns

**The study was consistent with the study done by Ziegler and Prior, (2007**) prove that in their study major anxiety for children or separation anxiety, loss of control , bodily injury and pain and uncertainty about limits. Parental separation has been long recognized as the greatest source of anxiety for children under 7 years of age.

**The second objective of the study is to assess the effectiveness of clay therapy among hospitalized preschool children in experimental group.**

In experimental group the post test score anxiety means (93.9) is lesser than the pretest score anxiety (148.47) mean. The difference in mean percentage on anxiety is 21. The obtained t-value between experimental pre and experimental post test is 20.84 at 0.000 level of significance.

The above results showed that there was a statistically significant reduction between the pretest and post test score of anxiety among hospitalized preschool children in experimental group. This shows that the difference in the score was due to the intervention (clay therapy) and also this proves that the clay therapy was effective in reducing the anxiety among hospitalized preschool children.

**These findings was consistent with the study done by Ghazaal Zaynaliyan1, Asghar Javani1 and Mo hammadreza Abedi (2014)** the study conducted to determine the effect of paint therapy and clay therapy on separation anxiety disorder symptoms in pre-school children as well as to compare the two mentioned therapies. The research methodology was individually done and child anxiety symptoms were studied by CSI-4 questionnaire. Research testers were six children with separation anxiety disorder randomly selected from those who visited Golestan Zendegi and Saf clinics in Isfahan through using a diagnostic interview and children's separation anxiety scale. The six children were divided in to three groups of two: painting therapy; clay therapy as well as control group who received no treatment. Followed by three baseline sessions, intervention stages were initiated and conducted in eight sessions. Research findings showed that according to data visual analysis based on descriptive statistics and visual analysis paint therapy and clay therapy were effective in reducing separation anxiety disorder symptoms in intervention step as compared to baseline ($P<0.5$); in addition, there was no significant difference between the two mentioned treatments ($P<0.5$). However, there was seen a difference between experimental and control groups. The research results show the effectiveness of paint therapy and clay therapy on reducing separation anxiety disorder.

**Hence, H1: There is a significant difference between the level of anxiety among hospitalized preschool children in experimental group before and after clay therapy, which is accepted.**

**The third objective is to compare the level of anxiety among hospitalized preschool children in control and experimental group.**

In control group post test, 30% had mild level of anxiety,26.7% had moderate level of anxiety and 43.3% had severe level of anxiety. In experimental group the post

test, 13.3% had no anxiety, 43.3% had mild level of anxiety and the remaining 43.3% had moderate level of anxiety.

Comparison of post -test anxiety score between experimental and control group, the experimental group post test anxiety mean (93.9) is lesser than the control group post test anxiety mean (138.73) .

In un-paired "t"-test, the obtained t-value between post test experimental and control group anxiety is 4.61 at 0.000 level of significance.

**The study was consistent with the study done by parisa rahmai (2010)** Data was collected from thirty six year old children with the objective to examine the effectiveness of clay therapy on reducing anxiety in them. For examining children's anxiety CSI-4 test developed by Gadow & Sprafkin, (1994) was employed which was answered by parents of children. Data was subjected to one- way analysis of variance. It showed significant difference on anxiety scores among groups ($F = 74.2$, $p < 0.01$). Scheffe test was employed to analyze pairs of means to see if there is a difference, which showed significant difference on anxiety of control group in post-test comparing with clay group and narrative group. No significant difference was found among clay group and narrative group respectively

**Hence, H2: There is a significant difference between the post test level of anxiety among hospitalized preschool children in experimental group and control group. which is accepted.**

**The fourth objective is to associate the level of anxiety among hospitalized preschool children with the selected socio-demographic variables in experimental group and control group .**

Statistical association between the post test score and selected demographic variables were calculated by using chi square test. In this study the anxiety is

associated with the children birth order and standard of studying in the experimental group.

This study findings revealed that the children had clay therapy , there was a significant association between demographic variables ( birth order x2= 15.27 (df=6) p = 0.018* , and standard of studying 13.25 (df=6) 0.045*) and the post level of anxiety in experimental group.

All other variables were not significantly associated with post level of anxiety in experimental group .

**It is consistent with the study conducted by Vernon, foley jeannem (2012)** experiments were carried out to investigate the effects of separation from mother and birth order on preschool children's responses to stress. neither birth order nor the combination of birth order and separation was related to responses to the potentially stressful situations. also, in neither sample did the 1st-born and later-born children differ in dependency nor did their mothers differ in the child-rearing practices assumed to contribute to dependency.

**H3 - There is a significant association in the level of anxiety among hospitalized preschool children with their selected socio demographic variables in experimental group and control group. which is accepted** .

# *Summary, Conclusion & Recommendations*

# CHAPTER VI

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with the summary of the study and the conclusions drawn. It clarifies the limitations of the study. The implications and recommendations are given for different areas of Nursing such as practice, education, research and administration in the Health care delivery system.

## 6.1 SUMMARY OF THE STUDY

Generally, hospitalization is a stressful experience for children. Numerous research studies have found that despite age and increased mastery, Preschool children have fears and concerns regarding illness and hospitalization. Concerns about pain, mutilation, immobility, separation from significant others, loss of control and disruption have been reported by hospitalized children as potentially stressful. Anxiety is a common human condition with which everyone must cope from time to time. Identified as a group of physical, behavioral, and mental changes occurring in response to danger or threat, anxiety actually serves a protective function by creating a sense of caution, care and focus (Barlow, 2002). On the other hand , if it becomes toxic, it can intrude upon one's awareness in a distressing manner, creating feelings that lead individuals to believe their abilities in any given situation are sorely lacking. These feelings in turn can result in a reduction in attention, ineffectiveness, and/or a lack of enjoyment in any given situation .

**Hence, this study** was undertaken to assess the effectiveness of clay therapy in reducing anxiety on hospitalized children of age group 3 to 6 years in Paediatric

medical ward, Institute of Child Health and Research Centre ,Government Rajaji hospital, Madurai ".

**The following objectives were set for the study:**

1. To assess the level of anxiety among hospitalized preschool children in experimental group and control group.
2. To assess the effectiveness of clay therapy among hospitalized preschool children in experimental group .
3. To compare the level of anxiety among hospitalized preschool children in experimental group and control group .
4. To associate the level of anxiety among hospitalized preschool children with selected socio-demographic variables in experimental group and control group.

**The study was based on the assumption that:**

- Hospitalized children are susceptible to develop anxiety.
- Children were explicit the reactions of hospitalizations : separation anxiety, depression (exposure to new environment such as doctors, injections etc.)

**The following hypothesis were formulated:**

- H1: There is a significant difference between the level of anxiety among hospitalized preschool children in experimental group before and after clay therapy.
- H2: there is a significant difference between the post test level of anxiety among hospitalized preschool children in experimental group and control group .

- H3: There is a significant association in the level of anxiety among hospitalized preschool children with the selected socio-demographic variables in experimental group and control group.

The conceptual framework for the study was based on widenbach's helping art of clinical nursing. A True-experimental research design was used in this study. The independent variable was clay therapy and dependent variable was level of anxiety. This study was conducted at the pediatric medical ward of Government Rajaji hospital, Madurai -625020. The target population of the study was children who were supposed to be hospitalized for 7 days in pediatric medical ward at Government Rajaji hospital, Madurai-20.

The study subjects were selected using simple random sampling and were assigned to two group (experimental group – 30, control group-30). The data collection tools used were,

1. Demographic data.
2. Hospital observed behavior check list on anxiety – 50 items

The reliability of hospital observed behavior check list on anxiety was found to be high and reliable with test retest method.

Content validity was obtained from three experts specialized in child health nursing and two experts in pediatric department. pilot study was conducted on 10 subjects to find out the feasibility of the study and it did not show any major flaw in the design of the study.

Data collection was carried out for six weeks. Based on the objects and hypothesis, the data collected were analyzed by using descriptive and inferential statistics.

## 6.2 MAJOR FINDINGS OF THE STUDY

- Majority of the children 36.7% (11) were in 4 to 6 years of age in the experimental group.
- In the sex wise distribution both gender were equal in experimental group .
- Based on birth order wise distribution in experimental group most of the children 46.7% (14) were in second child.
- Regarding religion wise distribution in experimental group majority 90% (27) of children were from Hindu .
- With view of family type wise distribution in experimental group most 60% (18) of children from nuclear family .
- Regarding residence wise distribution in experimental group, majority 40 % (12) of children were from urban area .
- Regarding income in experimental group, most of the 46.7% (14) children were from 2000-4000.
- Considering father's education wise distribution in experimental group majority 36.7% (11) of fathers were having secondary education .
- Regarding mother's education wise distribution in experimental group ,most 50 % (15) of the mothers were having secondary education.
- Regard the standard of studying wise distribution in experimental group , majority 46.7% (14) of the children were studying 1$^{st}$ std.
- Considering dietary pattern, experimental group most 90% (27) of children were from non-vegetarian..
- On pre assessment the level of anxiety score In the control group during pretest 30% (9) had mild level of anxiety, 26.7% (8) had moderate level of anxiety and 43.3% (13) had severe level of anxiety. In experimental group

before intervention 13.3% (4) had mild level of anxiety, 40% (12) had moderate level of anxiety and the remaining 46.7% (7) had severe level of anxiety. In experimental as well as in the control group children shows the symptoms of anxiety.

- On post assessment level of anxiety in control group, around 30% (9) children were in mild anxiety and 26.7 % (8) children were in moderate anxiety, 43.35% (13) children were in severe anxiety, no children were in no anxiety as they are not exposed to clay therapy. But in the experimental group 13.3%(4) had no anxiety, 43.3% (13) had mild level of anxiety and the remaining 43.3% (13)had moderate level of anxiety. In experimental children were not shown the severe anxiety after exposed to clay therapy.
- Experimental group has been recognized that the highest source of anxiety . In this study in experimental and control group is the worries or scared to receive an injection, separated from parents, unfamiliar surroundings and afraid of medical equipments.
- The post assessment anxiety mean score and SD of control group are 138.73 and 40.49 whereas in the experimental group the anxiety mean score and SD are 93.9 and 34.58. It is proved that there is statistically significant difference between experimental and control group.
- In paired "t" experimental group pre and posttest the obtained t-value is 20.84 at 0.000 level of significance. So the researcher observed that there is a highly significant reduction of anxiety after getting clay intervention among hospitalized preschool children.
- In posttest the control group, no significant association had been found out between the demographic variables of children and the level of anxiety

among hospitalized preschool children. There is no association between the level of anxiety among hospitalized children and demographic variables in control group.

- In post test experimental group significant association had been found out in birth order and standard of studying demographic variables of children and the level of anxiety among hospitalized preschool children.There is association between the level of anxiety among hospitalized children and selected demographic variables in experimental group.

## 6.3 CONCLUSION

The results of this study revealed that the children who received clay therapy during hospitalization had a statistically significant reduction in anxiety. Clay therapy is demonstrated to be effective in reducing the anxiety of hospitalized preschool children. Clay therapy is highly recommended because it is effective , easy to carry out and inexpensive.

## 6.4 IMPLICATIONS

The implications drawn from the study are of vital concern to the field of Nursing including Nursing service, Nursing Education, Nursing Research and Nursing Administration.

### Implications for Nursing practice

1. Nurse as a primary caregiver has a supreme responsibility in applying a holistic approach while giving care to the children. clay therapy is to be included as a supplementary Nursing care which helps to reduce anxiety of the

children who are hospitalized and also it helps the children to express their fears through rolling ,pulling of the clay

2. The study findings will help the Nursing personnel to include clay therapy as a Nursing intervention in the management in reducing the anxiety of hospitalized children.
3. A protocol steps on implementation of clay therapy can be developed and used in all wards of paediatric department in institute child health and research centre for the children who are hospitalized.

**Implications for Nursing Education**

Nursing is an evolving profession where there is a need for evidence based quality care with adequate knowledge. Hence the Nurse Educators are responsible to incorporate the complementary alternate therapy into the Nursing curriculum, thereby promoting interest for student Nurse.

1. The Nurse educators should include the diversion technique and clay therapy as a relief measure.
2. Nurse Educators can provide In service education for the health personnel's regarding alternative systems of therapies it can meet the needs of the health care system.
3. Nurse educators can conduct Seminars, Workshop, Conferences, Symposium, Demonstration and Micro teaching program regarding clay therapy in relieving anxiety.
4. It provides an opportunity for Nursing students to participate in various clay therapy like painting over the clay for anxiety management strategies.

**Implications for Nursing research**

1. Helps the Nursing researchers to focus and develop an insight on comprehensive alternative therapy like clay therapy.
2. Management and administration should give encouragement, motivation and financial support to do research on the effect of clay therapy for hospitalized children.
3. Furthermore effective study can be made by future research by the Nursing personnel.
4. Helps to do much research on various specialty departments.
5. Researchers can be done in various clay therapy like dance therapy, play therapy, movement therapy, painting therapy and music therapy.

**Implications for Nursing Administration**

1. Nursing administrators can organize in-service education and can conduct conference regarding the benefits and techniques of clay therapy.
2. Nurse administrators should prepare a procedure manual and protocols regarding clay therapy for hospitalized children
3. Nurse administrators must be assertive enough to discuss with hospital management in formulating policies regarding clay therapy for hospitalized children's. They can utilize the study for better quality care

## 6.5 LIMITATIONS

1. This study was done on a small sample size of 60; hence generalization is possible only for the selected subjects from selected hospital.
2. The researcher found little difficulty in getting cooperation from the children**.**

## 6.6 RECOMMENDATIONS

1. A similar study can be conducted in a larger sample .
2. Similar study can be conducted among different age groups and for mentally challenged patients in different settings.
3. A comparison study with drawing and clay, or clay and storytelling, clay and music, clay and dance can be done to determine the effect of these art therapy in the level of anxiety
4. Same study can be conducted to assess the anxiety level of pre operative children.
5. A longitudinal study can be conducted to assess the effect of clay therapy on anxiety of the children.
6. The study can be done to compare the effects of clay therapy for anxiety and cancer pain children.
7. A comparative study can be carried out to ascertain the effectiveness non pharmacological methods are used.

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# *Appendices*

# APPENDIX – I

From

Mrs.K.Jeyalakshmi,
M.Sc (N) I year student,
College of Nursing,
Madurai Medical College,
Madurai - 20.

To

**The Director and Head of the Department,**
Research Institute of Child Health Nursing,
Government Rajaji Hospital,
Madurai-20.

Through: The proper Channel

Respected Sir,

**Sub :** College of Nursing, Madurai Medical College, Madurai – M.Sc., (N) I year Child Health Nursing Student – Permission letter for conducting study in Medical ward at Government Rajaji Hospital, Madurai – requested – regarding.

As per the curriculum recommended by the Tamilnadu Dr.MGR Medical University I year M.Sc (N) students are required to conduct a dissertation study. I have selected the study topic **"A study to assess the effectiveness of clay therapy on anxiety among preschooler in Institute of Child health and Research Centre, Government Rajaji Hospital, Madurai"** for the partial fulfillment of the PG course. I assure that I will not interfere with the routine activity of the department. .

Forwarded for Consideration 6/1/14

Kindly consider my request and permit me to conduct the study.

Thanking you,

Yours faithfully,

Place:
Date:

Mrs. N. NAGARATHINAM, M.Sc., (N)
Lecturer in Pediatric Nursing
College of Nursing
Madurai Medical College
Madurai-625 020.

(K.JEYALAKSHMI)

Chitra Ayyappan 6/1/14

For DIRECTOR I/C
INSTITUTE OF CHILD HEALTH &
RESEARCH CENTRE
GOVT. RAJAJI HOSPITAL
MADURAI - 625 020

# APPENDIX – II

Ref. No. 68/E4/2/2014, Govt. Rajaji Hospital,
Madurai.20. Dated: 26.02.2014

**Institutional Review Board / Independent Ethics Committee.**
**Capt. Dr.B. Santhakumar, M.D., (F.M.,)** deanmdu@gmail.com
Dean, Madurai Medical College &
Govt Rajaji Hospital, Madurai 625020. **Convenor**

**Sub:** Establishment-Govt. Rajaji Hospital, Madurai-20-
Ethics committee-Meeting Minutes- for February 2014
Approved list - Regarding.

---

The Ethics Committee meeting of the Govt. Rajaji Hospital, Madurai was held on 07.02.2014, Friday at 10.00 am to 12.00.noon at the Anaesthesia Seminar Hall, Govt. Rajaji Hospital, Madurai. The following members of the committee have attended the meeting.

---

| | | |
|---|---|---|
| 1.Dr.V. Nagarajan, M.D., D.M (Neuro)<br>Ph: 0452-2629629<br>Cell.No 9843052029<br>nag9999@gmail.com | Professor of Neurology<br>(Retired)<br>D.No.72, Vakkil New Street,<br>Simmakkal, Madurai -1 | Chairman |
| 2. Dr.Mohan Prasad , M.S M.Ch<br>Cell.No.9843050822 (Oncology )<br>drbkcmp@gmail.com | Professor & H.O.D of Surgical<br>Oncology(Retired)<br>D.No.32, West Avani Moola Street,<br>Madurai -1 | Member<br>Secretary |
| 3. Dr. Parameswari M.D (Pharmacology)<br>Cell.No.9994026056<br>drparameswari@yahoo.com | Director of Pharmacology<br>Madurai Medical College | Member |
| 4. Dr.S. Vadivel Murugan, MD.,<br>(Gen.Medicine)<br>Cell.No 9566543048<br>svadivelmurugan_2007@rediffmail.com | Professor& H.O.D of Medicine<br>Madurai Medical College | Member |
| 5. Dr.S. Meenakshi Sundaram, MS<br>(Gen.Surgery)<br>Cell.No 9842138031<br>drsundarms@gmail.com | Professor & H.O.D of Surgery<br>Madurai Medical College | Member |
| 6. Mrs. Mercy Immaculate<br>Rubalatha, M.A., Med.,<br>Cell. No. 9367792650<br>lathadevadoss86@gmail.com | 50/5, Corporation Officer's<br>quarters, Gandhi Museum Road,<br>Thamukam, Madurai-20 | Member |
| 7. Thiru..Pala. .Ramasamy , BA.,B.L.,<br>Cell.No 9842165127<br>palaramasamy2011@gmail.com | Advocate,<br>D.No.72.Palam Station Road,<br>Sellur, Madurai -2 | Member |
| 8. Thiru. P.K.M. Chelliah ,B.A<br>Cell.No 9894349599<br>pkmandco@gmail.com | Businessman, 21 Jawahar Street,<br>Gandhi Nagar, Madurai-20 | Member |

The following Projects was approved by the committee.

| Name of P.G. | Course | Name of the Project | Remarks |
|---|---|---|---|
| K. Jeyalakshmi | M.Sc., (Nursing) College of Nursing, Madurai Medical College, Madurai. | A study to assess the effectiveness of clay therapy on anxiety among hospitalized preschool children in Institute of Child Health and Research Centre, Government Rajaji Hospital, Madurai. | Approved |

Please note that the investigator should adhere the following: She/He should get a detailed informed consent from the patients/participants and maintain it Confidentially.

1. She/He should carry out the work without detrimental to regular activities as well as without extra expenditure to the institution or to Government.

2. She/He should inform the institution Ethical Committee, in case of any change of study procedure, site and investigation or guide.

3. She/He should not deviate the area of the work for which applied for Ethical clearance.

She/He should inform the IEC immediately, in case of any adverse events or Serious adverse reactions.

4. She/He should abide to the rules and regulations of the institution.

5. She/He should complete the work within the specific period and if any

Extension of time is required He/She should apply for permission again and do the work.

6. She/He should submit the summary of the work to the Ethical Committee on Completion of the work.

7. She/He should not claim any funds from the institution while doing the work or on completion.

8. She/He should understand that the members of IEC have the right to monitor the work with prior intimation.

**Member Secretary** **Chairman**
**Ethical Committee**

26.2.14
**DEAN/Convenor**
**Govt. Rajaji Hospital,**
**Madurai- 20.**

24/2/14

**To**
**The above Applicant**
**-thro. Head of the Department concerned**

# APPENDIX - III

From

Mrs. Jeyalakshmi.k
II Year M.Sc(N),
College of Nursing,
Madurai MedicalCollege
Madurai-20.

To The Director,
The Department of Paediatrics
Institute of child Health and Research centre
Madurai.

Through,

The Principal,
College of Nursing,
Madurai Medical College
Madurai-20.

Respected Sir/ Madam,

Sub: Requisition for opinion and suggestion of experts for content validity of research tool.

With due regards, I kindly bring to your notice that I am a postgraduate student of College of Nursing, Madurai Medical College, Madurai. I have selected the below mentioned topic for dissertation to be submitted to The Tamilnadu Dr. M.G.R. Medical university, Chennai as a part of fulfillment of Master of Nursing degree.

**"A Study to Assess the Effectiveness of clay therapy on anxiety among hospitalized preschool children in institute of child health and research centre, Government Rajaji Hospital Madurai"**

Kindly validate the tool and render your expert opinion in this regard. I am thankful to you spending your valuable time for the validation of this tool. I will be grateful to you, if you do this favor to me as early as possible.

Thanking you,

Date:
Place: Madurai

Yours sincerely

Jeyalakshmi.k

(JEYALAKSHMI.K)

Forwarded
S.P
25/7/14
Mrs. S. POONGUZHALI
M.Sc(N), M.A., M.B.A., Ph.D.,
PRINCIPAL
College of Nursing
Madurai Medical College
Madurai-20.

# APPENDIX – IV

**CERTIFICATE OF VALIDATION**

This is to certify that the tool

SECTION A- Demographic Data

SECTION B- Hospital observed behavior check list on children"s anxiety

Prepared for data collection , JEYALAKSHMI.K, II year M.sc (N) student, College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on thesis entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN IN INSTITUTE OF CHILD HEALTH AND RESEA RCH CENTRE,GOVERNMENT RAJAJI HOSPITAL MADURAI."** has been validated by me.

**SIGNATURE OF THE EXPERT**

DIRECTOR
INSTITUTE OF CHILD HEALTH &
RESEARCH CENTRE
GOVT. RAJAJI HOSPITAL
MADURAI-625020

NAME:

DESIGNATION:

DATE:

## CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A- Demographic Data

SECTION B- Hospital observed behavior check list on children"s anxiety

Prepared for data collection , JEYALAKSHMI.K, II year M.sc (N) student, College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on thesis entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN IN INSTITUTE OF CHILD HEALTH AND RESEA RCH CENTRE,GOVERNMENT RAJAJI HOSPITAL MADURAI."** has been validated by me.

**SIGNATURE OF THE EXPERT**

NAME:

DESIGNATION:

Dr. N. KARUPPASAMY, M.S.,D.L.O.,M.Ch.
Asst. Prof. of Paediatric Surge
Govt. Rajaji Hospital, Madurai
Reg. No: 46434

DATE:

## CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A- Demographic Data

SECTION B- Hospital observed behavior check list on children"s anxiety

Prepared for data collection , JEYALAKSHMI.K, II year M.sc (N) student, College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on thesis entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN IN INSTITUTE OF CHILD HEALTH AND RESEA RCH CENTRE,GOVERNMENT RAJAJI HOSPITAL MADURAI."** has been validated by me.

**SIGNATURE OF THE EXPERT**

NAME: Prof. Stella Sagaya Mary. J.

DESIGNATION: Vice Principal
Matha college of Nursing
Mana madurai

DATE: 08/08/2014

## CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A- Demographic Data

SECTION B- Hospital observed behavior check list on children"s anxiety

Prepared for data collection , JEYALAKSHMI.K, II year M.sc (N) student, College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on thesis entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN IN INSTITUTE OF CHILD HEALTH AND RESEA RCH CENTRE,GOVERNMENT RAJAJI HOSPITAL MADURAI."** has been validated by me.

30/7/14

**SIGNATURE OF THE EXPERT**

PRINCIPAL
MADURAI APOLLO COLLEGE OF NURSING
ELIYARPATHI VILLAGE
MADURAI SOUTH TALUK, MADURAI-22.

NAME: Dr. A. HELEN M PERDITA.

DESIGNATION: PRINCIPAL.

DATE: 30.07.2014

PRINCIPAL,
MADURAI APOLLO COLLEGE OF NURSING
ELIYARPATHI VILLAGE
MADURAI SOUTH TALUK, MADURAI-22.

## CERTIFICATE OF VALIDATION

This is to certify that the tool

SECTION A- Demographic Data

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Prepared for data collection , JEYALAKSHMI.K, II year M.sc (N) student, College of Nursing, Madurai Medical College, Madurai, who has undertaken the study field on thesis entitled **"A STUDY TO ASSESS THE EFFECTIVENESS OF CLAY THERAPY ON ANXIETY AMONG HOSPITALIZED PRESCHOOL CHILDREN IN INSTITUTE OF CHILD HEALTH AND RESEA RCH CENTRE,GOVERNMENT RAJAJI HOSPITAL MADURAI."** has been validated by me.

**SIGNATURE OF THE EXPERT**

NAME:

DESIGNATION

DATE:

Principal
C.S.I. Jeyaraj Annapackiam College of Nursing and Allied Sciences
Merry Dew Hills, Jonespuram
Pasumalai. Madurai-625 004

# APPENDIX V

## ஆராய்ச்சி ஒப்புதல் கடிதம்

உங்கள் குழந்தை 3-6 வயதிற்கு உட்பட்ட குழந்தை ஆவர். ஆனால் அவர்கள் மருத்துவமனையில் இருக்கும் போது பதற்றம் கொள்பவர்கள். அவர்களை களிமண் விளையாட்டின் மூலம் பதற்றத்தை குறைக்கும் ஆய்வை மேற்கொள்ள உள்ளேன்.

பெயர்: வயது: தேதி:

ஆராய்ச்சி சேர்க்கை எண்:

இந்த ஆராய்ச்சியின் விவரங்களும் அதன் நோக்கங்களும் எனக்கு தெளிவாக விளக்கப்பட்டது. எனக்கு விளக்கப்பட்ட விவரங்களை நான் புரிந்து கொண்டு நான் எனது சம்மதத்தை தெரிவிக்கிறேன்.

இந்த ஆராய்ச்சியில் பிறரின் நிபந்தனையின்றி என் சொந்த விருப்பத்தின் பேரில் தான் பங்கு பெறுகிறேன் மற்றும் நான் இந்த ஆராய்ச்சியிலிருந்து எந்நேரமும் விலகிக் கொள்ளலாம் என்பதையும், அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் புரிந்து கொண்டேன்.

நான் இந்த ஆராய்ச்சியின் விவரங்கள் அடங்கிய தகவல் தாளை பெற்றுக் கொண்டேன். நான் என்னுடைய சுய நினைவுடனும் மற்றும் முழுச்சுதந்திரத்துடனும் இந்த ஆராய்ச்சியில் என்னையும் என் குழந்தையையும் ஈடுபடுத்திக் கொள்ள சம்மதிக்கிறேன்.

கையொப்பம்

# APPENDIX - VI

## DEVELOPMENT AND DESCRIPTION OF TOOL

**Section –A: Deals with demographic data.**

**Section B: Hospital observed behaviour checklist on children's anxiety**

## SECTION –A

**DEMOGRAPHIC VARIABLES:**

1. Age of the child
   a.3-4 years
   b. 4-5 years
   c. 5-6 years
   d.>6 years
2. Gender of the child
   a) Male
   b) Female

3.Birth order the child
   a. First child
   b. Second child
   c. Third child
   d. >third

4.Religion:
   a) Hindu
   b) Muslim
   c) Christian
   d) Others (specify)

5.Family type
   a. Nuclear family
   b. Joint family
   c. Extended family
   d. separated family

6. Residence

a. Rural

b. Remote village

c. Urban

d. semi urban

7. Income

a. < Rs.2000

b. Rs.2000- 4000

c. Rs.4000 – 6000

d. > Rs. 6000

8. Educational status of the father :

a. Non literate

b. Primary education

c. Secondary education

d. Higher secondary and above

9. Education of the mother

a. Non literate

b. Primary education

c. Secondary education

d. Higher secondary and above

10. Education of the child

a. No formal education

b. L.K.G

c. U.K.G

d.1st std

11 .Dietary pattern

a. Vegetarian

b. Non .vegetarian

**TOOL- II**

**HOSPITAL OBSERVED BEHAVIOUR CHECK LIST ON CHILDREN'S ANXIETY**

**INSTRUCTION TO THE OBSERVER:**

Observe the behavior of the child assign a score of 5,4,3,2,&1(strongly agree, agree, undecided, disagree, and strongly disagree) for each behavior if it is present , in the appropriate column repeat the same for all the two observations. The scores obtained for each observation should be summed up in the score column. The final score is the total of all the scores obtained / assigned on all four observation and can range from 50-250.

| SI. NO | ITEM | SCORE | | | | |
|---|---|---|---|---|---|---|
| | | I | 2 | 3 | 4 | 5 |
| 1. | **Reaction related to separation anxiety**<br>1. Refusing to eat.<br>2. Difficulty in sleeping .<br>3. Finds the favourite blanket or toy.<br>4. Crying quietly for parents, continually asking when they will visit.<br>5. Child has night mares.<br>6. Withdrawing from others.<br>7. Child appears sad / depressed.<br>8. Exhibits anger by hitting other children.<br>9. Child appears irritable.<br>10. Refusing to co-operate during self care activities.<br>11. Child exhibits temper tantrums and attention seeking behavior. | | | | | |

| S.NO. | ITEM | SCORE | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 2. | **Anxiety related Gaze behaviors**<br>12.Stares blankly with eyes wide open.<br>13.Stares at floor, head bowed.<br>14.Avoids eye contact with other | | | | | |
| 3. | **Anxiety related vocalization.**<br>15.usually quiet.<br>16. does not smile at others.<br>17. does not respond to others.<br>18. mumble monotonous words.<br>19.ask lot of questions.<br>20.verbalize fear of hospital personnel.<br>21.verbally abuses hospital personnel.<br>22.moans/groans(makes sounds of pain).<br>23.cries.<br>24.sobs(breath sharply and irregularly while crying).<br>25.sighs [takes audible deep breath ].<br>26.wails[complaints and screams].<br>27. bargaining to escape from procedure. | | | | | |
| 4. | **Anxiety Reaction related to loss of control.**<br>28.child cries and clings to the mother.<br>29.child avoids eye contact with hospital personnel.<br>30. child exhibits mild resistance and clings to the mother.<br>31.child gets into the bed ,and insists the mother to sit by the side. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5. | **Anxiety Reaction related to bodily injury** (facial expression and grimace behavior).<br>32. appears dazed (dull /hypoactive/confused)<br>33.manifests scary looks.<br>34. appears sad/ depressed .<br>35. frowns (draws eye brows together causing lines one forehead).<br>36. manifest grimace.<br>37. manifest tears .<br>38. pushes the nurse away.<br>39. tries to catch the equipment 9grab, secure).<br>40. hides himself from nurse. | | | | | |
| 6. | **Co-operation**<br>**41.**refuses to co-operate initially.<br>42. refuses to co-operate even after explanation.<br>43. refuses comfort / diversional measures.<br>44. exhibits anger by hitting ,kicking, biting , throwing objective/toy/eatable etc.<br>45.child does not allow to monitor vital signs.<br>46. child wailes ,tries to avoid and has to be restrained .<br>47. child spits the medications after forceful administration s.<br>48.child exhibits resistance and refuses to stay in the ward.<br>49. child eats only after diversional measures.<br>50. child sleeps only after providing diversional /comfort measures. | | | | | |

# APPENDIX – VII

## பகுதி - அ

**கீழ்க்கண்டவற்றில் பொருத்தமானவற்றை டிக் (✓) மார்க் செய்து குறிப்பிடவும்**

1. குழந்தையின் வயது

அ. 3-4 வயது ☐

ஆ. 4-5 வயது ☐

இ. 5-6 வயது ☐

ஈ. 6 வயதிற்கும் மேல் ☐

2. குழந்தையின் பாலினம்

அ. ஆண் ☐

ஆ. பெண் ☐

3. எத்தனையாவது குழந்தை

அ. முதலாவது ☐

ஆ. இரண்டாவது ☐

இ. மூன்று ☐

ஈ. மூன்றுக்கு அதிகமாக ☐

4. மதம்

அ. இந்து ☐

ஆ. முஸ்லீம் ☐

இ. கிறிஸ்தவர் ☐

ஈ. பிற மதத்தவர் ☐

5. குடும்ப வகை

அ. தனிக்குடும்பம் ☐

ஆ. கூட்டுக்குடும்பம் ☐

இ. நீட்டிக்கப்பட்ட குடும்பம் ☐

ஈ. பிரிந்த குடும்பம் ☐

6. வசிப்பிடம்

அ. கிராமம் ☐

ஆ. குக்கிராமம் ☐

இ. நகரம் ☐

ஈ. புறநகரம் ☐

7. வருமானம்

அ. ரூ.2000க்கும் குறைவாக ☐

ஆ. ரூ.2000 - 4000 ☐

இ. ரூ.4000 - 6000 ☐

ஈ. ரூ.6000க்கும் மேல் ☐

8. தாயின் கல்வித்தகுதி

அ. படிக்காதவர் ☐

ஆ. ஆரம்பக்கல்வி ☐

இ. நடுநிலைக்கல்வி ☐

ஈ. மேல்நிலைக்கல்வி அதற்கு மேல் ☐

9. தந்தையின் கல்வித்தகுதி

அ. படிக்காதவர் ☐

ஆ. ஆரம்பக்கல்வி ☐

இ. நடுநிலைக்கல்வி ☐

ஈ. மேல்நிலைக்கல்வி அதற்கு மேல் ☐

10. குழந்தையின் கல்வித்தகுதி

அ. பள்ளிக்கு செல்லாதவர் ☐

ஆ. மழலையர் பள்ளிக்கு கீழ் ☐

இ. மழலையர் பள்ளி ☐

ஈ. முதலாம் வகுப்பு ☐

11. உணவுப்பழக்க வழக்கம்

அ. சைவம் ☐

ஆ. அசைவம் ☐

**மருத்துவமனை சூழலில் குழந்தையின் பதற்றத்தை உற்று நோக்கு நடத்தை பற்றி சரிபார்க்கும் பட்டியல்**

**உற்றுநோக்குபவர் செயல் நெறி:-** மருத்துவமனையில் உங்கள் குழந்தையின் செயல்பாடு பற்றி கீழே கொடுக்கப்பட்டுள்ளது. அதில் சரியானவற்றிற்கு அதற்குரிய மதிப்பெண்கள் வழங்கப்படும். ஆகவே பொருத்தமானவற்றை கூறவும்.

| வ.எண் | பொருளடக்கம் | மதிப்பெண்கள் | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 1. | **பிரிவினை பதற்றம் தொடர்பான எதிர்வினை** | | | | | |
| | 1. சாப்பிடுவதற்கு மறுப்பது | | | | | |
| | 2. தூங்குவதில் சிரமம் | | | | | |
| | 3. பிடித்தமான போர்வையை அல்லது விளையாட்டு பொருளை தேடுவது | | | | | |
| | 4. பெற்றோர் எப்பொழுது பார்க்க வருவார்கள் என தொடர்ந்து கேட்டு கொண்டே இருப்பது | | | | | |
| | 5. கெட்ட கனவுகள் காண்பது | | | | | |
| | 6. பிறரிடம் இருந்து விலகிச் செல்வது | | | | | |
| | 7. சோகமாக / சோர்வாக காட்சியளிப்பது | | | | | |
| | 8. பிற குழந்தைகளை அடிப்பதன் வாயிலாக கோபத்தை வெளிப்படுத்துவது | | | | | |
| | 9. வெடுவெடுப்பாக தோற்றமளிப்பது | | | | | |
| | 10. சுயகவனிப்பு செயல்பாடுகளின் போது ஒத்துழைக்க மறுப்பதுளு | | | | | |
| | 11. வெகுண்ட பேச்சு மனநிலையையும், கவனத்தை ஈர்க்கும் நடத்தையையும் வெளிப்படுத்துதல் | | | | | |
| 2. | **பதற்றம் தொடர்பான கூர்ந்த நடவடிக்கைகள்** | | | | | |
| | 12. கண்களை விரித்து திறந்தவாறு வெறுமனே உறுத்தி நோக்குதல் | | | | | |
| | 13. தலையை கவிழ்த்தி தரை தளத்தில் உறுத்தி நோக்குதல் | | | | | |
| | 14. பிறருடன் கண் தொடர்பை தவிர்த்தல் | | | | | |
| 3. | **பதற்றம் தொடர்பான பேச்சு உருவாக்கம்** | | | | | |
| | 15. வழக்கமாக அமைதியாக இருப்பது | | | | | |
| | 16. பிறரிடம் சிரிக்காமல் இருப்பது | | | | | |
| | 17. பிறருக்கு பதிலளிக்காமல் இருப்பது | | | | | |
| | 18. சந்தம் மாறாத வார்த்தைகளை தெளிவின்றி முனுமுனுப்பது | | | | | |
| | 19. நிறைந்த கேள்விகளை கேட்பது | | | | | |

| வ.எண் | பொருளடக்கம் | மதிப்பெண்கள் | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| | 20. மருத்துவ ஊழியர்கள் மீதான பயத்தை சொல்வது | | | | | |
| | 21. வலியால் அழுவது/ முனுகுவது | | | | | |
| | 22. மருத்துவ ஊழியர்களை தகாத வார்த்தைகளால் பேசுவது | | | | | |
| | 23. சத்தமாக அழுவது | | | | | |
| | 24. விம்மி விம்மி அழுவது | | | | | |
| | 25. ஏக்க பெருமூச்சு விடுவது | | | | | |
| | 26. புலம்பி அழுவது | | | | | |
| | 27. சிகிச்சையில் இருந்து தப்புவதற்கு ஒப்பந்தம் பேசுவது | | | | | |
| 4. | **கட்டுப்பாட்டை இழந்து விடுவதால் ஏற்படும் பதற்றம் தொடர்பான எதிர்வினை** | | | | | |
| | 28. குழந்தை சத்தமாக அழுதவாறு அம்மாவை இறுகப்பற்றிக் கொள்வது | | | | | |
| | 29. மருத்துவமனை ஊழியர்கள் மீதான கண் தொடர்பை தவிர்த்தல் | | | | | |
| | 30. குழந்தை லேசான எதிர்ப்பை தெரிவித்து அம்மாவை பற்றிக் கொள்வது | | | | | |
| | 31. குழந்தை படுக்கைக்கு சென்று அம்மாவை பக்கத்தில் இருக்குமாறு வலியுறுத்துவது | | | | | |
| 5. | **வலி தொடர்பான பதற்றத்தின் எதிர்வினை (முகபாவனை / முகக்சுளிப்பு நடவடிக்கை)** | | | | | |
| | 32. குழப்பத்துடன் தோற்றமளிப்பது (சோர்வாக / மந்தமாக) | | | | | |
| | 33. பயம் கலந்த பார்வையை வெளிப்படுத்துவது | | | | | |
| | 34. சோகமாக / சோர்வாக தோற்றமளிப்பது | | | | | |
| | 35. புருவம் சுளித்தல் | | | | | |
| | 36. முகம் சுளிப்பது | | | | | |
| | 37. கண்ணீர் வடிப்பது | | | | | |
| | 38. செவிலியரை தள்ளி விடுவது | | | | | |
| | 39. மருத்துவ கருவிகளை பிடித்து இழுக்க முயற்சி செய்வது | | | | | |
| | 40. செவிலியரிடமிருந்து தன்னை மறைத்து கொள்வது | | | | | |
| 6 | **பதற்றம் தொடர்பான ஒத்துழையாமை** | | | | | |
| | 41. தொடக்கத்தில் ஒத்துழைக்க மறுப்பது | | | | | |
| | 42. விளக்கமளித்த பின்னரும் ஒத்துழைக்க மறுப்பது | | | | | |
| | 43. சௌகரியங்களை / மாற்று செயல்களை மறுப்பது | | | | | |

| வ.எண் | பொருளடக்கம் | மதிப்பெண்கள் | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| | 44. அடிப்பது, உதைப்பது, கடிப்பது, பொருட்களையோ, விளையாட்டு சாமான்களையோ/ தின்பண்டங்களையோ பிறவற்றையோ வீசி எறிவதன் வாயிலாக கோபத்தை வெளிப்படுத்துவது | | | | | |
| | 45. மிக முக்கிய அறிகுறிகளை கண்காணிக்க அனுமதிக்காமல் இருப்பது | | | | | |
| | 46. புலம்பி அழுவது, தவிர்க்க முயற்சிப்பது. அடக்கி கொள்வது | | | | | |
| | 47. மருந்துமாத்திரைகளை வலிந்து உட்கொண்ட பின்னர் துப்பி எறிவது | | | | | |
| | 48. எதிர்ப்பு தெரிவிப்பதும், சிகிச்சை அறையில் தங்குவதற்கு மறுப்பது | | | | | |
| | 49. மாற்று நடவடிக்கைகளுக்கு பின்னர் தான் சாப்பிடுவது | | | | | |
| | 50. சௌகரியங்களை / மாற்று சௌகரியங்களை பின்னர் தான் தூங்குவது | | | | | |

அளவீடு

5 - உறுதியாக ஒத்துக் கொள்வது

4 - ஒத்துக்கொள்வது

3 - தீர்மானமின்றி

2 - ஒத்துகொள்ளாமை

1 - உறுதியாக ஒத்துக்கொள்ளாமை

# APPENDIX – VIII

## CERTIFICATE OF ENGLISH EDITING

## TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation **"A study to assess the effectiveness of clay therapy on anxiety among hospitalized pre-school children in paediatric medical ward at Institute of Child health and research centre, Government Rajaji Hospital, Madurai"** done by Mrs.Jeyalakshmi.K., M.Sc., Nursing II year student, College of Nursing, Madurai Medical College, Madurai – 20 has been edited for English language appropriateness.

Name: Mr. Poovizhi

Signature 5/1/2015

Designation:

Institution: அரசு உயர்நிலைப்பள்ளி
மருதவனம் - 614 710

# APPENDIX – IX

## CERTIFICATE OF TAMIL EDITING

## TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation **"A study to assess the effectiveness of clay therapy on anxiety among hospitalized pre-school children in paediatric medical ward at Institute of Child health and research centre, Government Rajaji Hospital, Madurai"** done by Mrs.Jeyalakshmi.K., M.Sc., Nursing II year student, College of Nursing, Madurai Medical College, Madurai – 20 has been edited for Tamil language appropriateness.

Name: J. SAMPATH

Signature

Designation: B.Lit

Institution:

# APPENDIX – X

## THE VALLIAMMAL INSTITUTION (TVI)

11/6 B.B. Road 2nd St., Pankajam Colony , Madurai-625 009.
✆ 98942 49630; 98430 40226 email: ananthibetsy@rediffmail.com

Reg. No. PCC/40/July 14/278

Date: 30/07/14

### Certificate Course in Basic Counselling Skills and Clay Therapy

*This is to certify that* ..JEYALAKSHMI .K.... *has completed our* **CERTIFICATE COURSE IN BASIC COUNSELLING SKILLS AND CLAY THERAPY** *(24 hrs Part-time Education Programme designed and offered by experts) by effectively participating in theory & practical classes and successfully completing all the exercises. She has been placed in First Class*

THE VALLIAMMAL INSTITUTION (TVI)
11/6 B.B. Road
2nd St.,
Pankajam Colony ,
Madurai-625 009
Ph: 4210258

1/8/2014

Prof. Dr. S. Jeyapragasam M.Sc.,M.A.,M.A.,Ph.D.,
Director
Rajarajan Institute of Science (RISE)

Dr. B. Ananthavalli M.Sc.,M.A.,M.Phil.,Ph.D.,
Director & Secretary
The Valliammal Institution (TVI)

# APPENDIX - XI